

Regulation of oligopolies in the EU electronic communications markets: the current framework does not adequately address the oligopoly problem.

By Eleni Asteriou

Submitted in partial fulfillment of the requirements of the Degree of Master of Philosophy

I, Eleni Asteriou, confirm that the research included within this thesis is my own work or that where it has been carried out in collaboration with, or supported by others, that this is duly acknowledged below and my contribution indicated. Previously published material is also acknowledged below.

I attest that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge break any UK law, infringe any third party's copyright or other Intellectual Property Right, or contain any confidential material.

I accept that the College has the right to use plagiarism detection software to check the electronic version of the thesis.

I confirm that this thesis has not been previously submitted for the award of a degree by this or any other university.

The copyright of this thesis rests with the author and no quotation from it or information derived from it may be published without the prior written consent of the author.

Signature: Eleni Asteriou

Date: December 2<sup>nd</sup>, 2014

## **Abstract**

The present work has examined the thesis that the current framework for the regulation of SMP under EU law on electronic communications does not address the oligopoly problem in full. Under the SMP framework for electronic communications, joint dominance is considered a very rare occasion that may arise in symmetrical duopolies; there are strong doubts on whether the existing framework is capable in practice of addressing more complex issues associated with oligopolies in electronic communication markets. Wholesale international roaming is presented as a case study in support of this submission. Under the SMP framework for electronic communications, the Commission thinking has been too much dominated by the concept of single dominance. In view of the increasing number of oligopolistic markets in the post-liberalisation era, the framework needs to be revised to encompass wider market definitions, which will be able to catch oligopolistic situations also. The application of the collective dominance test of Annex II of the Framework Directive and the Guidelines on the assessment of market power will have to be updated in accordance with the *Impala* judgment. Also, the Guidelines should be revised to address also particulars of the application of remedies in oligopolistic markets and remedies of a quasi-contract type, like the imposition of penalties that may be used for the finance of the roll-out of new networks should be examined as an alternative to access obligations.

## TABLE OF CONTENTS

<b>Chapter 1: Concerns around the Oligopoly Problem in the European Telecommunications Markets. ....</b>	<b>7</b>
1.1. Oligopolies and competition law .....	8
1.1.1. Identification of the oligopoly problem .....	8
1.1.2. The treatment of the oligopoly problem in the development of competition law .....	12
1.2. Oligopolies in the regulation of electronic communications .....	21
1.2.1. The likely emergence of oligopolies in telecommunications markets ....	22
1.2.2. From state-owned monopolies to liberalisation .....	27
1.2.3. Difficulties associated with the setting of dominance as the threshold for ex ante regulation .....	34
<b>Chapter 2: Market delineation under the SMP regime: is there any room left for oligopoly regulation? .....</b>	<b>41</b>
2.1. Defining product markets in electronic communications .....	41
2.1.1. The significance of market delineation for competition law purposes ...	42
2.1.2. The influence of technology on product market definition in electronic communications .....	49
2.2. Defining product markets for SMP regulatory purposes .....	53
2.2.1. The method of pre-definition .....	53
2.2.2. Markets susceptible to regulation .....	60
2.3. Geographic delineation of electronic communication markets .....	81
2.3.1 Criteria for geographic delineation .....	81
2.3.2. Markets escaping national borders .....	85
2.4. Conclusions .....	87
<b>Chapter 3: Assessing Market Power in Oligopolistic Electronic Communications Markets .....</b>	<b>90</b>
3.1. Effective competition and significant market power .....	91

3.1.1. Defining effective competition in theory .....	91
3.1.2. Interpretation of lack of efficiency in NRA Decisions .....	96
3.2. Factors affecting the creation of collective dominance .....	99
3.2.1 Market Concentration.....	101
3.2.2. Transparency and retaliation .....	118
3.2.3. Other factors .....	126
3.3. Conclusions.....	134

**Chapter 4: The history of Roaming as a potential failure of SMP regulation on oligopolistic markets .....137**

4.1. The development of international roaming through European merger cases .....	137
4.2. Regulation of international roaming in Europe .....	145
4.2.1. The original complaints about excessive prices in roaming markets .....	145
4.2.2. Roaming under the 2002 regulatory framework for electronic communications .....	147
4.2.3. The introduction of Roaming Regulations .....	152
4.3. Brief conclusions on the case of roaming .....	158

**Chapter 5: Available remedies under SMP regulation and their effectiveness for the regulation of oligopolistic markets – Part I. ....160**

5.1. Outline of the measures provided in the Directives .....	160
5.1.1. Applicable provisions and principles .....	161
5.2. Transparency and non-discrimination .....	164
5.2.1 Transparency .....	164
5.2.2 Non-discrimination .....	167
5.3. Separating accounts and functions.....	176
5.3.1 Accounting Separation .....	176
5.3.2 Functional Separation.....	181
5.4 Access Obligations .....	190
5.4.1 The duty to share an (essential) facility .....	190

5.4.2. Ex ante access obligations as a specific demonstration of the refusal to deal principles .....	194
5.4.3 Are oligopolies compatible with access obligations? .....	200
5.4.4. Is there any alternative? .....	204
5.5. Conclusions.....	211
<b>Chapter 6: The effectiveness of Available Remedies in oligopolistic contexts –</b>	
<b>Part II: Price control.....</b>	<b>214</b>
6.1. Prices, telecoms and oligopolies.....	214
6.2. Price regulation as the last resort .....	214
6.3. Exclusionary pricing practices.....	219
6.3.1 Price Squeezes.....	219
6.3.2 Margin squeeze and predation in the telecommunications sector.....	222
6.3.3 Excessive Pricing .....	227
6.4. Main pricing elements of the telecommunications industry.....	231
6.4.1. General concepts of cost .....	231
6.4.2. Cost-orientation principles .....	235
6.5. Conclusions.....	242
Chapter 7: Conclusions of the thesis .....	244
Bibliography .....	253

# Chapter 1: Concerns around the Oligopoly Problem in the European Telecommunications Markets.

---

The present work addresses the approach adopted by NRAs and the Commission for the eventual regulation of oligopolies under the current framework on the regulation of significant market power in electronic communications. This is done through the detailed review of Commission notifications under Article 7 of the Framework Directive, literature, Commission documents, studies and case-law summarised in the Bibliography section. Material is updated until 30.09.2013. The position taken in this thesis is that, under the SMP framework for electronic communications, joint dominance is considered a very rare occasion that may arise in symmetrical duopolies; there are doubts on whether the existing framework is capable of addressing more complex issues associated with oligopolies in electronic communication markets. It is submitted that the case of wholesale international roaming, which is presented as a case study in this work, makes this point, i.e. it is a more complex case of collective dominance that failed to be addressed under the existing framework, hence, was dealt with under the Roaming Regulations. The work also suggests improvements to the guidelines given by the Commission on the application of SMP framework in oligopolistic markets.

The first chapter identifies concerns around the existing regulation of oligopolies in the European telecommunication markets. The first section describes the so-called oligopoly problem in markets with few players and sets out the approach of competition law to this problem through the development of the concept of collective dominance. The second section starts with a description of the likely emergence of oligopolies in European telecommunication markets in order to show that the oligopoly problem merits attention in the context of electronic communications in

Europe, albeit the focus of regulation to date has been on single dominance as a result of the need to deal with impediments created by the former incumbents.

## **1.1. Oligopolies and competition law**

### **1.1.1. Identification of the oligopoly problem**

The literal definition of an ‘oligopoly’ is as simple as the two constituents of the word, which has a Greek origin: ‘oligon’, which means few in Greek and ‘polion’, which was a term applied to define markets in Ancient Greek; hence, an oligopoly is a market with few market players or, more precisely, a market structure with few firms and many buyers<sup>1</sup>.

In an oligopoly, the ability to exploit market power derives directly from the peculiar characteristic of the market itself, namely the presence of only few players, each of which enjoys a strong position on the market without being dominant, and a high level of transparency on the market that allows each player to be aware of the conduct of the others. These features create interdependence among all players, which confers on them a position of dominance on the market that is collectively held<sup>2</sup>. In light of their interdependence, undertakings usually try to find an equilibrium that allows them to cohabit on the market<sup>3</sup>. There are, however, oligopolistic markets where competition is intense as a result of market conditions. The indispensable characteristic of an oligopoly is the existence of a sustainable mechanism for the coordination of behaviour that may lead to parallelism of prices and capacity<sup>4</sup>, which results from the structure of the market (limited number of players of a considerable size). The firm’s rational choice to either collude or compete is thus driven by a trade-off between the short-term profits of competition and the expected loss from retaliation<sup>5</sup>.

---

<sup>1</sup> Alese, F., *The Economic Theory of Non-Collusive Oligopoly and the Concert of Concerted Practice Under Article 81*, [1999] ECLR, 379.

<sup>2</sup> Vecchi, T., *Unilateral Conduct in an Oligopoly according to the Discussion Paper on Art. 82: Conscious Parallelism or Abuse of Collective Dominance?*, [2008] World Competition, 386.

<sup>3</sup> *Ibid.*, 387.

<sup>4</sup> Kokkoris, I., *Assessment of Mergers Inducing Coordinated Effects in the Presence of Explicit Collusion*, [2008] World Competition, 498.

<sup>5</sup> Mezzanote, F., *Can the Commission use Article 82EC to combat Tacit Collusion? CCP Working Paper 09-5*, February 2009, 16.



As a result of their interdependence relationships, it is very difficult to distinguish collusive forms of conduct from parallel forms attributed to the nature and structure of an oligopolistic market<sup>6</sup>. This is the so-called ‘oligopoly problem’, notably the lack of a “yes or no” answer to the question: is competition in the specific oligopolistic market effective.

Economists have developed various models to approach the ‘oligopoly problem’. The Cournot model is what economists regard as the classic oligopoly model. It was presented by the French mathematician Augustin Cournot in 1838, who tried to establish a precise relationship –in terms of prices, profit and supplied quantity– between (a) concentration of supply, production costs and price elasticity of market demand and (b) market outcome<sup>7</sup>. The Cournot model focuses on restriction of capacity and shows under what circumstances it is rational for firms to restrict their capacity or output individually, thus causing prices to rise above the competitive level (profit maximising output level). This model tries to accommodate a chain of reactions of the oligopolists, where to each player makes a choice without knowing what the competitors will do, but taking into account what choice can rationally be expected from them. It is a static model in the sense that there is only one period in which oligopolists make their decisions and it also operates under the assumptions that rivals keep their output fixed and that they all anticipate equal marginal costs. The outcome of the model is that for any particular number of firms, there exists stable price-quantity equilibrium<sup>8</sup>.

The Bertrand theory was developed in 1888<sup>9</sup>. The theory tries to calculate the price that would be expected in a market structure and establishes the starting point of the

---

<sup>6</sup> Whish, R., *Competition Law*, Butterworths LexisNexis, 2003, 466.

<sup>7</sup> Cournot, A., *Researches into the Mathematical Principles of the Theory of Wealth*, 1938 (1897, translation into English by N.T. Bacon). In Chapter 7, Cournot presents his famous duopoly model, whereby he shows that if each producer chooses a quantity that maximizes his profits subject to the quantity reactions of his rival, the quantities chosen by the rival producers are in accordance with each other's anticipated reactions. He notes that under duopoly, the price is lower and the total quantity produced greater than under monopoly and shows further that as the number of producers increases, the quantity becomes greater and the price lower and able to reach a level where the price is equal to marginal cost.

<sup>8</sup> Niels, G., *Collective Dominance: More than just Oligopolistic Interdependence* [2001] ECLR, 169.

<sup>9</sup> Bertrand, J.L.F., *Calcul des Probabilites*, 1888, Paris: Gauthier-Villars. In this text book he stated what was later referred to as the Bertrand paradox.

effectiveness of competition where companies are tempted to lower such price. In this model, firms chose their price level as opposed to the profit maximising output level of the Cournot model. The model's main deficiency lies in the fact that in the case of homogeneous goods, it leads to the same outcome as perfect competition, even in duopolies, because firms keep undercutting each other's prices until the level of marginal cost<sup>10</sup>. This deficiency is the reason for the Bertrand model not being systematically used for the assessment of oligopolistic structures.

The welfare costs in the static Cournot model or Bertrand model with capacity constraints or differentiated products illustrate well the costs of vigorous competition. These models predict an equilibrium price in oligopoly which is lower than the monopoly price, but higher than the price in perfect competition. Although the welfare costs of vigorous competition can be higher than those of perfect competition, they are still lower than those of collusion<sup>11</sup>.

Modern economic theory has criticised the foregoing models for heavy reliance on static equilibrium concepts. Namely, they take into account only one period in which oligopolists make their decisions, thus omitting dynamic considerations with the effect of being unrealistic and non-corresponding to business reality<sup>12</sup>.

Starting from Chamberlin in 1929<sup>13</sup>, who found that the interaction of two completely independent sellers may give rise to a complete absence of price competition, without however any sort of agreement, the economists of the 20<sup>th</sup> century developed the theories of "interdependence" or "game theory" or the theory of "tacit collusion", as a response to the foregoing criticisms<sup>14</sup>.

The Harvard school, represented by Bain, Kaysen and Turner, gathered a huge amount of empirical data and found a link between oligopolistic market concentration and

---

<sup>10</sup> Niels, G., *ibid.*, 170.

<sup>11</sup> Mezzanote, F., *ibid.*, 15.

<sup>12</sup> Etter, B., *The Assessment of Mergers in the EC under the Concept of Collective Dominance* [2000] *Journal of World Competition*, 114.

<sup>13</sup> E. H. Chamberlin, "Duopoly: Value Where Sellers Are Few", (1929) 44 *Quarterly Journal of Economics*, 63.

<sup>14</sup> Aumann, R.J., *Game Theory* in *The New Palgrave Dictionary of Economics Online*, 2008, 2<sup>nd</sup> edition, Durlauf, S., Blume, L. (eds), [www.dictionaryofeconomics.com](http://www.dictionaryofeconomics.com)

supra-competitive profits (the “SCP paradigm”)<sup>15</sup>. In their view, if oligopolies achieve supra-competitive profits it is because, like monopolies, they enjoy an “unreasonable” degree of market power. On the other hand, Chicago School experts argued that oligopolistic market structures often yielded efficiencies. In their view, Harvard scholars had succumbed to a daft economic error, that of conflating correlation and causation by failing to envision the alternative explanation that oligopolists achieve profits thanks to superior efficiency<sup>16</sup>. Stigler demonstrated that collusion can only arise in the presence of demanding conditions – *i.e.* oligopolists must be able to monitor and police adherence to a pre-defined collusive agreement<sup>17</sup>.

The advances in game theory in the 1970s based on a classic prisoner’s dilemma, where the long-term profits achieved with collusion exceed the short-term profits achieved with competition, build on the traditional models but analyse the conditions under which it is rational for individual firms to stick to anti-competitive market equilibrium both in the short and in the long run, namely to co-ordinate future price increases through the use of a self-enforcing mechanism. Firms take decisions individually, unilaterally, independently and rationally, but, as a result of the characteristics of the market, they end up co-ordinating their market behaviour in an entirely non-cooperative fashion<sup>18</sup>. Game theory principles explain that collusion is a conduct, and that the incentive for firms to behave this way lies in the fact that collusion pays more than vigorous competition. Moreover, they illustrate that the collusive conduct of firms has to be self-enforceable, which occurs through a mechanism of retaliation by which firms are able to defeat the short-term incentive to undercut prices<sup>19</sup>.

---

<sup>15</sup> J. S. Bain, *Industrial Organization*, 2nd ed., John Wiley & Sons, New York, 1968; C. Kaysen C. and D.F.Turner, *Antitrust Policy*, Harvard University Press, Cambridge, 1959.

<sup>16</sup> Petit, N., *The ‘Oligopoly Problem’ in EU Competition Law*, in *Research Handbook in European Competition Law*, I. Liannos and D. Geradin eds., Edward Elgar, September 2013, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1999829](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1999829), p. 5.

<sup>17</sup> Stigler, G., *A Theory of Oligopoly*, [1964] *Journal of Political Economy*, 44.

<sup>18</sup> Christensen, P., Rabassa, V., *The Airtours decision: Is there a new Commission approach to collective dominance?*, [2001] *ECLR*, 228.

<sup>19</sup> Mezzanote, F., *ibid.*, 18.

It is noted that no oligopoly theory can predict the effect on competition, but it can identify general criteria of market structure and conduct for the assessment of collective dominance<sup>20</sup>.

The EU Horizontal Merger Guidelines<sup>21</sup> summarise the conditions that must exist cumulatively, for the non-cooperative equilibrium of game theory to arise and endure, in paragraph 41:

‘Coordination is more likely to emerge in markets where it is relatively simple to reach a common understanding on the terms of coordination. In addition, three conditions are necessary for coordination to be sustainable. First, the coordinating firms must be able to monitor to a sufficient degree whether the terms of coordination are being adhered to. Second, discipline requires that there is some form of credible deterrent mechanism that can be activated if deviation is detected. Third, the reactions of outsiders, such as current and future competitors not participating in the coordination, as well as customers, should not be able to jeopardise the results expected from the coordination’.

Notably, first, oligopolists must share a *common understanding* of the price at which collusion should unveil, otherwise they will keep raising price at different levels, and there will be competition in the market. Second, there must be a “*credible threat of retaliation*” against rival cheaters, to discourage any temptation to deviate. Third, oligopolists must be able to *monitor* each other’s prices so as to “*detect*” any competitive deviation. Fourth, the sustainability of tacitly collusive prices is conditioned on the oligopolists’ ability to “*discourage production by external firms*”, in other words, entry<sup>22</sup>.

### **1.1.2. The treatment of the oligopoly problem in the development of competition law**

---

<sup>20</sup> Niels, G., *ibid.*, 172.

<sup>21</sup> Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, [2004] OJ C31/5.

<sup>22</sup> Petit, N., *ibid.*, 7.

In competition law, the joint exercise of market power through the co-ordinated behaviour of an oligopoly has been associated with joint or collective dominance<sup>23</sup>. The precise number of firms operating in the market at issue is not essential and varies between markets<sup>24</sup>. What is essential is that there should be sufficiently few firms in the market, so that each firm recognises that its best choice of action depends on the choices of its rivals<sup>25</sup>.

As explained by Kook and Kerse<sup>26</sup>:

“The concept of collective dominance rests on the economic proposition that in highly concentrated markets it is highly likely, if not inevitable, that if only a small number of firms survive, they will recognise their inter-dependence and the futility of aggressive competitive behaviour. They will adapt their behaviour, not necessarily collusively, to that which a profit-maximising dominant single firm would choose. For this to occur, market conditions must be such that, in the medium to long term, competitive activity (i.e. action which pays no heed to competitors’ likely reactions) by a firm will not bring it any sustainable economic benefit”.

The Court of Justice had not been always keen on applying the general principles of competition law of article 102 of the EC Treaty to cases of dominance involving more than one undertakings. In *Hoffmann La Roche*<sup>27</sup> and in *Zuchner*<sup>28</sup> the CJEU held that a condition precedent for the application of article 102 was the unilateral nature of the abusive conduct of the undertaking, which could not be the case where more than one undertakings are involved. It was not until some years later in *Italian Flat Glass*<sup>29</sup>, where the Court of First Instance took a different view:

---

<sup>23</sup> Christensen, P., Rabassa, V., *ibid.*, 227. If express collusion between market players is experienced in oligopolistic markets, this may be caught by Article 101 of the Treaty, like any other form of anti-competitive behavior, refer also to Jones, A., Suffrin, B., *EC Competition Law*, 2<sup>nd</sup> edition, 2004, 772-785.

<sup>24</sup> Views have been expressed on the quantitative understanding of a tight oligopoly as a group of two to five undertakings. Refer to Haupt, H., *Collective Dominance under Article 82 EC and the EC Merger Control in the light of the Airtours Judgement* [2002] ECLR, 435.

<sup>25</sup> Niels, G., *ibid.*, 169.

<sup>26</sup> Cook & Kerse, *EC Merger Control*, Oxford University Press, 2000, 171.

<sup>27</sup> Case 85/76 *Hoffmann La Roche v. Commission* [1979] ECR 461, para. 39.

<sup>28</sup> Case 172/80 *Gerhard Zuchner v. Bayerische Vereinsbank AG* [1981] ECR 2021, para. 10.

<sup>29</sup> Case T-68/89 *Societa Italiano Vetro v. Commission* [1992] ECR II 1403, para. 358.

“... There is nothing, in principle, to prevent two or more independent economic entities from being, on a specific market, united by such economic links that, by virtue of that fact, together they hold a dominant position vis-à-vis the other operators on the same market”.

Since the first attempt to identify the elements of a collective dominant position in *Italian Flat Glass*, the GC emphasised the necessity of “economic links” between the parties involved. The Court appeared to suggest that economic links might be established where there are structural links between the undertakings in question<sup>30</sup>, since reference was made to the existence of agreements between the parties or licenses providing them technological advantages<sup>31</sup>. The same position was taken by the Commission in its Notice on Access Agreements in the telecommunications sector<sup>32</sup>, where the agreements for cooperation or interconnection agreements between operators were considered to establish significant economic links for the establishment of collective dominance, if other factors so permit.

Albeit the principles laid by *Italian Flat Glass* are quoted as authority in the cases that are mentioned in this section, the concept of collective dominance has evolved around the examination of merger cases in the years that followed.

The judgements in *Almelo* and *Kali & Salz*<sup>33</sup> required the existence of links establishing “the same conduct on the market” by the undertakings involved<sup>34</sup>. *Gencor*<sup>35</sup> took things a step further in recognising that evidence of economic interdependence was sufficient to establish collective dominance. The General Court in *Gencor* clarified that structural links are not a prerequisite for the establishment of collective dominance:

“[Anti-competitive] structures may result from the existence of economic links in the strict sense ... or from market structures of an oligopolistic kind where each undertaking may become aware of common interests and, in

---

<sup>30</sup> Withers, Ch., Jephcott, M., *Where to now for EC oligopoly control?* [2001] ECLR, 297.

<sup>31</sup> Para. 358 of *Italian Flat Glass*.

<sup>32</sup> [1998] OJ C 265/2, par. 91(a).

<sup>33</sup> Joint Cases C-68/94, *France v. Commission* and C-30/95 *Société Commerciale des Potasses et de l'Azote and Entreprise Minière et Chimique v. Commission* [1998] 4 CMLR 829, para. 221.

<sup>34</sup> Case C-393/92, *Municipality of Almelo and others v NV Energiebedrijf Ijsselmij*, par. 42.

<sup>35</sup> Case T-102/96, *Gencor v. Commission* [1999] 4 CMLR 971, para. 186.

particular, cause prices to increase without having to enter into an agreement or resort to a concerted practice”<sup>36</sup>.

The position was confirmed in *Compagnie Maritime Belge*<sup>37</sup>:

“[T]he existence of an agreement or of other links in law is not indispensable to a finding of a collective dominant position; such a finding may be based on other connecting factors and would depend on an economic assessment and, in particular, on an assessment of the structure of the market in question”.

The Court shifted the focus of attention from the existence of economic links to their effect by requiring the undertakings involved to act as a single entity against market conditions. This shift of attention has been criticised as implying that there can be no price competition between the constituents of a collective dominant position<sup>38</sup>, which is contrary to the Court’s earlier judgements, such as *Gencor*, which required for the establishment of economic links a mere

“relationship of interdependence existing between the parties to a tight oligopoly within which, in a market with the appropriate characteristics, in particular in terms of market concentration, transparency and product homogeneity, those parties are in a position to anticipate one another’s behaviour and are therefore strongly encouraged to align their conduct in the market in such a way as to maximise their joint profits by restricting production with a view to increasing prices”<sup>39</sup>.

In *Airtours*<sup>40</sup>, a leading case for collective dominance, which involved the merger of two out of the four major vertically integrated travel groups in the UK, the Commission contended that tacit collusion is not a necessary condition for collective dominance:

---

<sup>36</sup> Para. 277 of the judgment.

<sup>37</sup> Case C-395/96P, *Compagnie Maritime Belge v. Commission* [2000]3 CMLR 1076, para. 45.

<sup>38</sup> Preece, S., *Compagnie Maritime Belge: Missing the boat?* [2000] ECLR, 390.

<sup>39</sup> Para. 276. Conversely, the *Gencor* judgement has been criticised as failing to consider the capability of the group’s independent undertakings to act not only in an independent, but also in an identical manner on the relevant market, refer to Haupt., H. *ibid.*, 441-442.

<sup>40</sup> Case IV/M. 1524 *Airtours/First Choice* [2000] OJ L 93/01.

‘it is sufficient that the merger makes it rational for the oligopolists, in adopting themselves to market conditions to act, *individually*, in ways which will substantially reduce competition’<sup>41</sup>.

The *Airtours* judgement has been considered to identify a gap in the coverage of merger regulation, in that mergers can have adverse effects on competition, yet lead to a position of neither single firm dominance nor collective dominance<sup>42</sup>. Although the decision was overruled by the GC on appeal<sup>43</sup> on the standard of evidence accepted by the Commission, the principles set out by the Commission in the original decision were not challenged.

The GC’s judgement on *Airtours* provides a clearer description on the requisite links between the oligopolists for tacit co-ordination to be established. The decision refines earlier judgements in explaining the links that place oligopolists in a position towards the other members of the group favouring collusive behaviour. Such links,

“may arise as the result of a concentration where, in view of the actual characteristics of the relevant market and of the alteration in its structure that the transaction would entail, the latter would make each member of the dominant oligopoly, as it becomes aware of common interests, consider it possible, economically rational, and hence, preferable, to adopt on a lasting basis a common policy on the market with the aim of selling at above competitive prices, without having to enter into an agreement or resort to a concerted practice within the meaning of Article [101] EC and without any actual or potential competitors, let alone customers or consumers, being able to react effectively”<sup>44</sup>.

In *Airtours*, the GC laid down a strict standard regarding the finding of joint dominance. According to the GC, the Commission is required not simply to reflect the normal economic conditions of the market, but must convincingly indicate not only the anticompetitive impact of commercial links but the likelihood and sustainability of the

---

<sup>41</sup> Par. 54 of the decision.

<sup>42</sup> Kokkoris, I., *The Reform of the European Control Merger Regulation in the Aftermath of the Airtours Case – the Eagerly Expected Debate: SLC v Dominance Test*, [2005] ECLR, 41.

<sup>43</sup> Case T-342/99 *Airtours v. European Commission*, Decision of 6.6.2002.

<sup>44</sup> Para. 61 of the judgement.



common policy as well. Hence, the GC contended that the fact that there were the same institutional shareholders common to Airtours, First Choice and Thomson could not be regarded as evidence of collective dominance in the absence of evidence demonstrating that the common shareholders were capable of exercising influence on the management of these undertakings or that there was a mechanism for exchanging information between them<sup>45</sup>. Also, the Commission's arguments with regard to the "tendency towards collective dominance" alleged to exist on the affected market already prior to the concentration were rejected<sup>46</sup>.

The GC judgment on *Airtours* has been criticized for having drawn too close an analogy between tacit collusion and explicit anticompetitive agreements<sup>47</sup>. Thus, a couple of years later, in *IMPALA*, the GC accepted that the conditions defined by the Court in *Airtours* as necessary for the existence of tacit collusion, may

‘in the appropriate circumstances, be established *indirectly* on the basis of what may be a very mixed series of indicia and items of evidence relating to the signs, manifestations and phenomena inherent in the presence of a collective dominant position’<sup>48</sup>.

A couple of years later the CJEU seems to have confirmed the judgment in holding at paragraphs 125 and 128<sup>49</sup> that

“objection cannot be taken to paragraph 251 of itself”

and that

“In applying those criteria, it is necessary to avoid a mechanical approach involving the separate verification of each of those criteria taken in isolation, while taking no account of the overall economic mechanism of a hypothetical tacit coordination”.

---

<sup>45</sup> Par. 90f of the judgement.

<sup>46</sup> Para. 63 of the GC judgement.

<sup>47</sup> Kokkoris, I., *ibid.* at footnote 60, 439.

<sup>48</sup> Case T-464/04, *Independent Music Publishers and Labels Association (Impala) v. Commission*, 13 July 2006, [2006] ECR I-2, par. 251.

<sup>49</sup> C-413/06 P, *Bertelsmann AG v. Impala*, 10 July 2008, [2008] ECR II-4951. The Court of Justice also confirmed the application of the *Airtours* criteria as a condition precedent for the establishment of collective dominance, Mezzanotte, F., *Interpreting the Boundaries of Collective Dominance in Article 102 TFEU*, [2010]4 *European Business Law Review*, 519-537.

Before the issue of the Impala judgment, the GC had also considered in *Laurent Piau v. Commission*<sup>50</sup>, that the regulations for members of the FIFA clubs lay down the conditions for the provision of services in the football players market are capable of establishing collective dominance, but disentangled the establishment of such position from its abuse, which was not proven<sup>51</sup>.

In the recent *EFIM v. Commission* case<sup>52</sup>, the GC citing *Piau v. Commission* reiterated that collective dominance under Article 102 TFEU covers situations of tacit coordination and dismissed the claims of the applicant alleging abuse of collective dominance from the part of Hewlett Packard in the ink cartridge market, because it failed to establish the three necessary conditions precedent to tacit coordination, i.e. (i) detection opportunities; (ii) retaliation mechanisms; and (iii) absence of countervailing power of actual and potential rivals<sup>53</sup>.

The 2005 Discussion Paper recognised the possibility for unilateral conduct to be considered an abuse of collective dominance, when a single-firm's conduct that occurs in an oligopoly market has anti-competitive consequences and is a manifestation of the collective dominance<sup>54</sup>. However, since the Guidance Paper only dealt with collective dominance, similar references were omitted. Yet, not all single-firm forms of conduct in a tight oligopoly should be considered abusive, because these may represent merely an expression of conscious parallel behaviour and intelligent reaction to the conduct of the other members of the group<sup>55</sup>. Thanks to the favourable structure of the market, oligopolists have means that allow them to signal to the other undertakings their intentions and to monitor their reaction on their adherence to an anti-competitive practice, thus increasing transparency on the market and consequently reducing uncertainty as to the other undertakings' conduct<sup>56</sup>. The expression of the interdependence between the members of an oligopoly may take the form of absence of competition as a natural result of each company behaving rationally in its own

---

<sup>50</sup> Case T-193/02, *Laurent Piau v. Commission*, judgment of 26 January 2005.

<sup>51</sup> Par. 114f. of the judgment.

<sup>52</sup> Case T-296/09, *EFIM v. Commission*, judgment of 24 November 2011.

<sup>53</sup> Par. 71f of the judgement, which was also upheld by the Court of Justice, in C-56/12, judgement of 19 September 2013, not yet reported.

<sup>54</sup> DG Competition Discussion Paper on the application of Article 82 of the Treaty to exclusionary abuses, December 2005 (the 'Discussion Paper'), par. 74-75.

<sup>55</sup> Vecchi, T., *ibid.*, 393-394.

<sup>56</sup> *Ibid.*, 388.

interest in a concentrated market with price transparency and homogeneous products without any communications with its competitors<sup>57</sup>.

The existence of an anti-competitive market outcome does not necessarily imply that firms co-operate or otherwise behave with a definite intention to restrict competition<sup>58</sup> and no party may be held to induce anti-competitive conduct, simply because it reacts intelligently to the strategic moves of its competitors<sup>59</sup>. For a unilateral conduct to fall within the definition of abuse of a dominant position, such conduct should benefit the collective dominant position jointly held by the members of the oligopoly. Such would be the case of a conduct increasing transparency on the market or reducing the uncertainty as to the other members' behaviour, like advance price-announcements indicating the intention not to lower prices by way of adopting a most favoured customer clause in contracts with buyers<sup>60</sup>.

In fact, there has been wide discussion after *Airtours*, given the stringent constraints placed on the Commission by the GC in this case, that an SLC test would give the Commission scope to plead co-ordinated or unilateral effect arguments in the alternative and, thereby, to reach cases in oligopolistic markets where it had a real concern that competition would be reduced by a concentration, but where it could not make a collective dominance case. The economic justification behind the suggested change in the test was found on static economic models of Cournot competition, according to which any increase in supply concentration may lead to higher equilibrium prices, even if the merged entity is not necessarily the market leader<sup>61</sup>.

---

<sup>57</sup> *Ibid.*, 386-387, Temple Lang, J., *Oligopolies and Joint Dominance in Community Antitrust Law*, [2001] Annual Proceedings of the Fordham Corp. L. Inst., 274.

<sup>58</sup> Kloosterhuis, E., *Joint Dominance and the Interaction between Firms* [2001] ECLR., 79.

<sup>59</sup> In *Woodpulp* (Case C-89/85 *Alstrom v. Commission* [1993] ECR I-1307, para. 71), the CJEU held that intelligent reactions to the market by oligopolists is an alternative plausible explanation to a concerted practice, which does not infringe Article 101.

<sup>60</sup> Vecchi, *ibid.*, 396-397, derives the argument on the advantage of the other members of the oligopoly from the *Irish Sugar* judgement and Article 101 case-law establishing that all members of a complex agreement prohibited under Article 101 may be held liable if such behaviour was intended to pursue the common purpose of the agreement (e.g. joined cases T-25/95, T-26/95, T-30/95 to T-32/95, T-34/95 to T-39/95, T-42/95 to T-46/95, T-48/95, T-50/95 to T-65/95, T-68/95 to T-71/95, T-87/95, T-88/95, T-103/95 and T-104/95, *Cementeries CRB v. Commission*).

<sup>61</sup> Briones, *A Balance of the Impact of Economic Analysis on the EU Competition Policy*, [2009] World Competition, 28.

In its Green Paper for the Review of Merger Regulation<sup>62</sup>, the Commission launched a comparative discussion of the relative merits of the dominance test and of the SLC test used in other jurisdictions, notably the USA and the UK, thereby prohibiting acquisitions of shareholdings with possible effects of substantially lessening competition or tending to create a monopoly<sup>63</sup>. One of the main reasons for the suggested change was that, leading academics and practitioners were casting doubt on the ability of the dominance test to deal with the so-called “non-collusive” oligopolies, namely situations where the oligopolists would not be acting in pursuit of a common policy, but would rather each individually exercise market power<sup>64</sup>. The dominance test might not capture mergers that substantially lessen competition, unless they make tacit co-ordination likely<sup>65</sup>.

In its response to the Green Paper, the United Kingdom mentioned that the SLC test, especially in oligopolistic markets, is fundamentally better adapted to merger control, primarily because it is directly grounded on economic analysis and on the impact of the merger on competition, whereas Sweden argued that the SLC test may be assumed to deal more effectively with cases where one cannot state there is a risk of concerted practices, but concentration enables the company to act to the disadvantage of the consumer, the so-called ‘unilateral effects’<sup>66</sup>. Proponents of the dominance test argued in favour of the certainty created by European precedents on the concept of dominance<sup>67</sup>, as opposed to the vagueness inherent in the SLC test, particularly in

---

<sup>62</sup> European Commission, Green Paper on the Review of Council Regulation (EEC) No 4064/1989, COM(2001) 745/6.

<sup>63</sup> Section 7 of the Clayton Act and sections 22, 33, 35 and 36 of the Enterprise Act.

<sup>64</sup> Fountoukakos, K., Ryan, S., *A New Substantive Test for EU Merger Control*, [2005] ECLR., 282. The dominance test has been also criticised as incapable of catching certain other types of mergers, including mergers between firms producing differentiated products that give rise to unilateral effects, unless markets are narrowly defined. See further Bishop, S., Walker, M., *ibid.*, 310.

<sup>65</sup> Vickers, J., *Competition Economics and Policy*, [2003] ECLR, 102. Goddard, G., Curry, E., *New Zealand’s New Mergers Test: A Comparison of Dominance and Substantial Lessening of Competition in the Supermarket Industry*, [2003] ECLR, 310, who gave the example that under the dominance test, a proposed merger between the second and third largest players in an oligopolistic market would be cleared predominantly on the basis of the constraining influence of the first largest competitor.

<sup>66</sup> Kokkoris, I., *ibid.*, 43.

<sup>67</sup> See further Boege, U., Mueller, E., *From the Market Dominance Test to the SLC Test: Are There Any Reasons for a Change?*, [2002] ECLR, 495-498: the authors examine the outcome of the European *Airtours* case and the US *Heinz/Beech-Nut* case, which were both overturned on the second degree by the Courts to support that both tests themselves may lead to different results, depending on the person who applies them.

relation to the adjective ‘substantial’, whereas others pleaded directly against the lowering of the intervention threshold to capture non-collusive oligopolies<sup>68</sup>.

Finally, a compromise was reached and the Commission decided to retain an altered version of the dominance test in the 2004 Merger Regulation, where the creation or strengthening of a dominant position is only one example, although the principal example of a significant impediment to effective competition (hence the SIEC test). The SIEC test aims at clarifying the notion of collective dominance, contained in the substantive test, as well as ensuring that the new regulation applies to mergers leading to unilateral effects in situations of oligopoly<sup>69</sup>.

Scholars have suggested, though, that the outcome of merger cases would not have been much different under the traditional dominance test<sup>70</sup>, the reason being that the two tests generally apply the same substantive criteria, such as market structure and barriers to entry<sup>71</sup>. Nonetheless, even those who challenge the effects of the change in the test recognize that the burden to substantiate coordinated effects may be higher than in the case of unilateral effects analysis<sup>72</sup>.

In any event, it should be clarified that this thesis only touches on the regulation of collusive behavior in oligopolistic electronic communications markets and will not examine unilateral conduct<sup>73</sup>.

## **1.2. Oligopolies in the regulation of electronic communications**

---

<sup>68</sup> However, the concept of dominance is an abstract term in itself as demonstrated in section 3.1.

<sup>69</sup> Kokkoris, I., *ibid.*, 44.

<sup>70</sup> Briones, J., *ibid.*, 28f.

<sup>71</sup> Litzell, M., *The Appraisal of Collective Dominance under the Clarified Substantive Test of the New EC Merger Regulation – A Step towards greater global convergence of merger control?*, [2005] 1 ELSA SPEL, 41.

<sup>72</sup> *Ibid.*, 30.

<sup>73</sup> However, it is noted that although the first draft of the Framework Directive was released after the Green Paper for the Review of Merger Regulation was published and in the course of discussions which lead to the adoption of the SIEC test two years after the 2002 regulatory framework, the prospective of establishing a test for SMP regulation on the basis of an SLC-type of test was not examined.

### 1.2.1. The likely emergence of oligopolies in telecommunications markets

In network industries (telecommunications, electricity, gas, postal services, etc.), as a result of market opening reforms, oligopolies have replaced monopolies, and risks of tacit collusion are conceivable<sup>74</sup>. In electronic communications markets, as new entrants appear in traditionally monopolistic markets, the focus of attention with respect to potentially abusive behaviour is gradually shifted from one to more than one incumbents, who may be found to hold SMP collectively.

The Commission declares the emphasis placed by the current regulatory framework on the role of network infrastructure competition<sup>75</sup>. Inevitably, concentration in such markets will be high. Despite the growing loss of market share by incumbents in network markets, the high investment costs entailed in most network industries, coupled with the rapid advances of technology in technology-driven sectors and the low returns of a limited customer base because of network externality features<sup>76</sup>, render the probability of a large number of players being active in network (wholesale) markets very small. The deployment of both fixed and mobile networks require continuous investment since future sustainable growth in maturing markets like voice telephony requires new service innovation and business models<sup>77</sup>. As pointed out by the Commission in its Implementation Report on electronic communications markets for the years 2012-2013, the average European may choose between 3-4 alternative providers. According to the Commission, in the years of 2012-2013, the dynamics of the mobile market have remained fairly stable, with the average shares of the three main operators ranging between 25% and 35%<sup>78</sup>.

---

<sup>74</sup> Petit, N., *ibid.*, 50.

<sup>75</sup> E.g. par. 7 of Commission Recommendation of 20.09.2010 on regulated access to Next Generation Access Networks (NGA), [2010]OJ L 251/35.

<sup>76</sup> The Commission states in its Staff Working Document accompanying its Recommendation on NGA (p. 15) that it is unclear if commercial investment will suffice to serve all of today's broadband subscribers with upgraded NGA services in the near future.

<sup>77</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Progress Report on the Single European Electronic Communications Market 2009 (the 15<sup>th</sup> Implementation Report), COM 2010, 253final, p. 1.

<sup>78</sup> European Commission, Staff Working Document - Implementation of the EU regulatory framework for electronic communications – 2014, at p. 9.

High concentration in wholesale markets is caused primarily by the high barriers to entry at wholesale level, due to high sunk costs and spectrum limitations. The Commission has recognised the oligopolistic structure of the market of the mobile market, which is due to spectrum limitations that have not been eliminated, and that in Member States with small number of licenses<sup>79</sup> and no prospect of entry in the medium term, there may exist incentives and possibilities for mobile operators to tacitly collude<sup>80</sup>. The Commission calls for coordinated action by member states and market players to open up the digital dividend spectrum for different services, as this will create an opportunity particularly for wireless broadband network operators to gain valuable radio spectrum, which in turn is expected to reinforce competition in the provision of broadband services<sup>81</sup>. However, despite technology developments, which continually improve the exploitation of the spectrum, spectrum limitations also limit the number of players in markets for services using platforms dependent on spectrum<sup>82</sup>.

In addition, the few competitors in network markets may have similar cost structures, and constant interactions between market players based on agreements of access and interconnection, or infrastructure share of telephony markets that possess the characteristics – and the incentive – necessary to engage in collective dominant actions that could harm consumers<sup>83</sup>. Such constant interactions and requirements imposed by legislation regarding publication of interconnection and wholesale access rates may be reasonably found to also increase transparency of rates in the relevant wholesale markets.

Further, in the voice markets, it is reasonable to expect that SMP operators (both fixed and mobile) shall seek to respond to the loss of revenue caused by VoIP probably

---

<sup>79</sup> In 2012 all member states have 3 mobile network operators, with the exception of Cyprus with 2 operators active (Telecommunications Horizontal Assessment Report, p. 23).

<sup>80</sup> Explanatory Note to the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation [2007] OJ L344/65, 45.

<sup>81</sup> 2009 Implementation Report, 9.

<sup>82</sup> Walden, I., *Telecommunications Law and Regulation: An Introduction* in Walden I., Angel, J., *Telecommunications Law*, Blackstone, 2002, 9

<sup>83</sup> Ryan, P., *European Competition Law, Joint Dominance, and the Wireless Oligopoly Problem*, [2005] Columbia Journal of European Law, vol. 11, pp 353-371.

through joint anti-competitive practices (whether expressly or tacitly) against VoIP operators, like blocking services<sup>84</sup>. In fact, there is evidence pointing to the same direction, since mobile operators all over the world decided to block on their networks VoIP providers like Skype that make the receipt of calls on a portable device in a WiFi or 3G network feasible, with the exception of 3 in the UK and Verizon in the US<sup>85</sup>.

Convergence also increases oligopoly concerns. This is because convergence allows operators of a similar size and financial strength (e.g. incumbents and broadcasters or IT multinationals<sup>86</sup>) to compete on the same markets. Symmetry of sizes and financial strength is a crucial factor for the establishment of collective dominance, as discussed in detail in chapter 3. The current market trend towards bundled products is significantly affecting the competitive dynamics, as operators of different platforms are in a position to make multiple offerings (TV, voice and internet)<sup>87</sup>. Bundled offers are gaining popularity throughout the EU, though at very different paces. In several Member States, a majority of households take triple or quad-play subscriptions. In terms of market dynamics, triple and quad-play are said to reduce churn. They also drive alliances across the fixed and mobile segments of the market, as operators are under pressure to become quad-play providers<sup>88</sup>.

Moreover, the number of alliances and mergers between operators throughout the EU particularly in the course of the previous decade indicated a trend towards consolidation in the sector, including a number of fixed-mobile transactions, in order to respond to higher levels of competition, decreasing revenues from traditional sources and to the increasing need to invest in data capacity<sup>89</sup>. Most of the major European operators followed the strategy of acquiring presence in several member-states through various corporate structures, with the purpose of expanding their presence in various member states. This strategy is endorsed by the Commission, who

---

<sup>84</sup> Muys, S., *New Whines and Old Whineskins: Addressing the Challenge of Regulating IP-based Networks and Services*, [2006] CTLR, 59-66. Technology neutrality issues are discussed in chapter 2.

<sup>85</sup> Skype Blocked by Mobile Phone Operators at [www.prlog.org/10537471-skype-blocked-by-mobile-phone-operators.html](http://www.prlog.org/10537471-skype-blocked-by-mobile-phone-operators.html).

<sup>86</sup> In May 2011, Microsoft announced the take-over of Skype. The transaction was approved by the EU, <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1164>.

<sup>87</sup> The trend towards multiple or bundled offerings is discussed in under section 2.2.2.3.

<sup>88</sup> European Commission, Staff Working Document - Implementation of the EU regulatory framework for electronic communications – 2014, at p. 9.

<sup>89</sup> European Commission, Staff Working Document - Implementation of the EU regulatory framework for electronic communications in 2012 and 2013, at p. 9.



considers pan-European consolidation in the sector a primary target and a necessary condition for the establishment of a single European market. Section 1.2 of the Proposal for a Regulation laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, and amending Directives 2002/20/EC, 2002/21/EC and 2002/22/EC and Regulations (EC) No 1211/2009 and (EU) No 531/2012 reads:

“Today, Europe is fragmented into 28 separate national communications markets, each with a limited number of players. As a consequence, while no operator is present in more than half of the Member States, most in far fewer, overall more than 200 operators serve a market of 510 million of customers. EU rules on, for example, authorisations, regulatory conditions, spectrum assignment and consumer protection are implemented in diverging ways. This patchy scenario raises barriers to entry and increases the costs for operators wanting to provide cross-border services thereby impeding their expansion. This stands in stark contrast with the US or China who have one single market of 330 and 1400 million customers respectively, served by four to five large operators, with one legislation, one licensing system, and one spectrum policy. Economies of scale and new growth opportunities can improve the returns on investment in high-speed networks and can at the same time drive competition and global competitiveness. Yet within the EU, operators cannot benefit sufficiently from them. The Spring European Council of 2013 called on the Commission to report by October 2013 on the remaining obstacles to the completion of a fully functioning Digital Single Market, and present concrete measures to establish the single market in information and telecommunications technology as early as possible”<sup>90</sup>.

It is, thus, evident, that the European strategy endorses the creation of operators for the provision electronic communication services with a pan-European footprint, both in fixed and mobile markets, providing bundles of communication and possibly media services. In pursuit of this strategy, the national markets of the various Member-states will be comprised of the same players, or next to the former national incumbent the same players will be active in most telecommunication markets at wholesale level throughout the EU (who may have been incumbents themselves in the member State of

---

<sup>90</sup> COM (2013) 627 final, 11.09.2013.

their registered office)<sup>91</sup>. The exit of smaller national players from the market may enhance conditions capable of creating collusive behaviour particularly as a result of the multi-market contact of the same operators, which may be considered capable of sustaining retaliatory action. In *MCI/WorldCom/Sprint*, the Commission acknowledged that a collective dominant position may have been created prior to the notified merger following the exit of a number of players from the market, i.e. that the top-level Internet connectivity market experienced a significant level of oligopolistic concentration through internal growth. When the market eventually reaches a state of maturity with the appearance of a cluster of large, entrenched firms, those oligopolists subsequently find themselves in a position where they can cease competing, and adopt profitable, passive commercial strategies.

Finally, the drastic toughening of anti-cartel policies across the world may incidentally spur tacit collusion on oligopolistic markets, in particular when market players are not risk averse. In this context, market players engage in avoidance strategies, and find creative ways to achieve anticompetitive outcomes short of a conventional competition law infringement<sup>92</sup>.

In short, wholesale network markets in electronic communications may exhibit oligopoly characteristics and there may be concern that these markets are conducive to tacit collusion. However, the focus of *ex ante* SMP regulation in electronic communications has been on the monopolies of the former *incumbents* and builds on traditional single dominance principles, that may be difficult to adapt to the more complex assessment of oligopolistic behavior. These concerns are described in the following sub-sections.

---

<sup>91</sup> For example, in 2008, when DT acquired participation interests in the Greek incumbent OTE, it already provided fixed telecommunications services in Bulgaria, Germany, Hungary, Romania and Slovakia and operated public mobile networks in Austria, the Czech Republic, Germany, Hungary, the Netherlands, Poland, Slovakia and the UK (par. 3 of Case COMP/M.5148-DT/OTE). In 2007, when FT acquired control of the mobile operator One in Austria, FT was already providing fixed communication services in France, Poland, Spain and Belgium and operated mobile communication services through its subsidiary Orange in Belgium, France, the Netherlands, Luxembourg, Poland, Romania, Slovakia, Spain and the UK (par. 2 of Case COMP/M.4809-FT/MidEuropaPartners/One).

<sup>92</sup> Petit, N., *ibid.*, 54. This hypothesis, which according to Petit, remains untested, is said to draw on the work of Prof. Schinkel in *Market Oversight Games*, Working Paper No. 2010-11, Amsterdam Center for Law & Economics, 15 October 2010, who argues that market players try to avoid the competitive pressure imposed on them that the regulators are working to keep up.

### 1.2.2. From state-owned monopolies to liberalisation

The history of European telecommunications legislation shows that addressing market failures caused by the presence of former monopolies was at the centre of SMP legislation in the EU. The liberalisation process of the ex-monopolistic telecommunications sector has evolved around the debate of enacting sector specific regulation against reliance on pure competition law principles<sup>93</sup>.

Harmonisation and liberalisation of telecoms at European level began in 1987 with the publication of the Green Paper on Telecommunications<sup>94</sup>. The Green Paper described the poor state of telecommunications in the EC compared with the United States and Japan and called for competition in all aspects of telecommunications services and equipment, except basic voice telephone service. At the time, basic voice services represented 80 to 90 percent of telecom revenues in Europe and allowed public operators to receive protected revenues to maintain their universal service obligation and allowed them an interim period to adjust and modernise to meet the challenges of the emerging market place<sup>95</sup>. The adoption of regulatory measures was *sine qua non* both for terminating the incumbent's exclusive rights, which had been established through domestic legislative measures and for the setting of common standards and opening up existing networks to competitors as a condition precedent for the viability of any private investment initiative. In addition, the principles of the internal market required that a harmonised legal environment is created throughout the community, to ensure a level playing field for investors in the sector.

The liberalisation process began with early EC measures focused on introducing competition in the presence of incumbent monopolies through various directives which required the gradual abolition of the incumbent's exclusive and special rights. The first step in this direction was introduced through the withdrawal of exclusive and special

---

<sup>93</sup> Grewlich, K., "Cyberspace": *Sector-Specific Regulation and Competition Rules in European Telecommunications* [1999] C.M.L.Rev, 947.

<sup>94</sup> European Commission, *Towards a Dynamic European Economy: Green Paper on the Development of the Common Market for Telecommunications Services and Equipment*, COM(87) 290 final.

<sup>95</sup> Naftel, M., *The Natural Death of a Natural Monopoly: Competition in EC Telecommunications after the Telecommunications Terminals Judgement*, [1993]3 ECLR, 106.

rights in the supply of telecommunications equipment<sup>96</sup>. The core of the old legislative framework was found in the Services Directive<sup>97</sup> and the ONP Directive<sup>98</sup>.

The central aim of the Services Directive was to open the telecommunications infrastructure to service providers, who would compete with the TOs in providing services over that network, save as for basic voice telephone service, mobile, telex, paging and satellite services, to become open to competition<sup>99</sup> and required the structural separation of all regulatory functions from the commercial activities of the incumbents<sup>100</sup>. With the exception of these services from the ambit of the Directive, public telecommunications operators were given an interim ‘grace period’ to prepare themselves from a financial perspective to operate in a competitive environment<sup>101</sup>.

The ONP Directive, with ONP standing for Open Network Provision, dealt with open networks and harmonisation of diverse technical and commercial environments<sup>102</sup>. The use of the network, owned by the incumbents, was opened for providers of competitive services under harmonised conditions and subject to general requirements imposed by telecommunications administrations. The ONP Directive established the basic tariff principles for network services on objectivity, transparency and publication, non-discrimination and guarantee of equality of access and treatment of users<sup>103</sup>.

Under the Interconnection Directive<sup>104</sup>, the Directive amending the Directive on Leased Lines<sup>105</sup> and Directive 98/10/EC amending the ONP Directive with respect to voice telephony and universal service, the Commission decided to regulate market power in the sector. Telecommunications organisations holding 25% market share were regarded as having significant market power in the markets designated in the

---

<sup>96</sup> With the Terminal Equipment Directive Commission Directive 88/301/EEC of 16 May 1988 on competition in the markets in telecommunications terminal equipment, [1988] OJ L 131/73, the Commission requested the separation of regulatory functions regarding approval of terminal equipment from the business functions of incumbents.

<sup>97</sup> Commission Directive 90/388/EEC of 28 June 1990 on competition in the markets for telecommunications services, [1991] OJ L 192/10.

<sup>98</sup> Commission Directive 90/387/EEC of 28 June 1990 on the establishment of the internal market for telecommunications services through the implementation of open network provision, [1991] OJ L 192/1.

<sup>99</sup> Articles 1 and 2 of the Services Directive.

<sup>100</sup> Article 7.

<sup>101</sup> Recital 18 of the Services Directive.

<sup>102</sup> Article 1 par. 1 of the ONP Directive.

<sup>103</sup> Article 3.

<sup>104</sup> Directive 97/33/EC.

<sup>105</sup> Directive 97/51/EC.

respective Directives (fixed public telephone network, leased lines service, public mobile telephone networks)<sup>106</sup>. The Directives of this old framework allowed NRAs to designate organisations holding less or more than 25% of the respective market share, taking into account the organisation's ability to influence market conditions, its turnover relative to the size of the market, its control of the means of access to end-users, its access to financial resources and its experience in providing products and services in the market<sup>107</sup>.

These organisations with significant market power (SMPs) were subject to additional obligations (compared with non-SMPs), which comprised the following:

- non-discrimination with regard to interconnection offered to other operators<sup>108</sup>;
- provision of necessary information and specifications on request, to facilitate conclusion of the interconnection agreement<sup>109</sup>;
- transparency, cost orientation and unbundling of interconnection charges<sup>110</sup>;
- publication of reference interconnection offer<sup>111</sup>;
- obligation to apply cost-accounting systems and accounting separation in relation to interconnection and unbundling of charges related to the sharing of the cost of universal service obligations<sup>112</sup>;
- any obligation related to the provision of leased lines<sup>113</sup> (no discrimination, publication of relevant information, provision of minimum set of leased lines, cost orientation and transparency for tariffs);
- quality targets and keeping up-to-date information concerning their performance<sup>114</sup>;
- provision of calling-line identification, direct dialling-in and call forwarding<sup>115</sup>;
- provision of reasonable access to the fixed public telephone network at network termination points other than the commonly provided network termination points<sup>116</sup>;

---

<sup>106</sup> Article 4 par. 3 of Directive 97/33/EC, Article 2 par. 3 of Directive 97/51/EC, Article 2 par. 2(i) of Directive 98/10/EC.

<sup>107</sup> *Ibid.*.

<sup>108</sup> Article 6(a) of Directive 97/33/EC.

<sup>109</sup> Article 6(b) of Directive 97/33/EC.

<sup>110</sup> Article 7 par. 2 and Article 7 par. 4 of Directive 97/33/EC.

<sup>111</sup> Article 7 par. 3 of Directive 97/33/EC.

<sup>112</sup> Article 7 par. 4 and Article 7 par. 6 of Directive 97/33/EC.

<sup>113</sup> Directive 92/44/EEC, as amended by Directive 97/51/EC (Article 2).

<sup>114</sup> Article 12 par. 1 and 2 of Directive 98/10/EC.

<sup>115</sup> Article 15 par. 1 of Directive 98/10/EC.

<sup>116</sup> Article 16 of Directive 98/10/EC.

- no discrimination in making use of the fixed public telephone network, including any form of special network access<sup>117</sup>;
- cost orientation and unbundling of tariffs for the use of public telephone network, independently of the type of application implemented by the users<sup>118</sup> and associated cost-accounting obligations<sup>119</sup>.

Under the aforementioned provisions, the Commission opted in favour of asymmetric regulation in relation to undertakings that could be found to enjoy dominance in pre-defined telecommunication markets. The threshold was set at 25% of market shares, which is the lowest indication of single dominance, according to competition law theory<sup>120</sup>. The selection of this threshold indicates that the Commission was primarily targeting single dominance when setting the definition of market power, since joint dominance has been accepted as possible to occur between players holding individually lower market shares<sup>121</sup>. The introduction of the ‘25% rule’ departed from the general meaning of dominance in competition law, which is not strictly linked to specific percentages of market shares and was debated on this ground.

After the liberalisation date, the Commission decided to review its position with respect to its overall approach to regulation. At the same date, having regard to technological developments, which allowed the coming together of telecoms with the media and IT sectors, the Commission launched its Convergence Green Paper<sup>122</sup>, which was put to public consultation and the aggregated responses were evaluated in a follow-up communication (‘the Results of Public Consultation on Convergence’)<sup>123</sup>.

In the Results of Public Consultation on Convergence, it appeared that setting up a single horizontal, i.e. platform independent framework for all three sectors found considerable support, in particular for networks and infrastructure. Access to networks and digital gateways was widely identified as the key commercial and regulatory

---

<sup>117</sup> Article 16 par. 7 of Directive 98/10/EC.

<sup>118</sup> Article 17 of Directive 98/10/EC.

<sup>119</sup> Article 17 of Directive 98/10/EC.

<sup>120</sup> Whish, R., *ibid*, 153.

<sup>121</sup> The details are given in the context of chapter 3.

<sup>122</sup> European Commission, Convergence of the Telecommunications, Media and Information Technology Sectors and the Implications for Regulation, COM(97) 623.

<sup>123</sup> Summary of the Results of the Public Consultation on the Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors: Areas for further Reflection, SEC(98) 1284.

concern together with the perceived need for a framework for investment in infrastructure<sup>124</sup>.

In the 1999 Communications Review the Commission took the view that regulation for general interest objectives will remain in place, whereas regulation for managing transition to competition will be progressively reduced<sup>125</sup>. Services provided over networks would, in turn, be governed by other rules at EU and national levels (content regulation, e-commerce etc.). Internet transmission services would be treated in the same way as other transmission services.

Indications of the need to have oligopolistic markets regulated *ex ante* made their first appearance, as commentators considered that areas such as international roaming and call termination rates (i.e. sensitive areas of the oligopolistic mobile marketplace) called for strong regulatory or competition-based intervention as there was significant evidence that operators were taking advantage of an imperfectly competitive marketplace to charge excessively high rates<sup>126</sup>. In the direction of increased reliance on competition law principles, it was suggested that the 25% threshold for the designation of SMP is abolished and a new definition adopted in line with the traditional competition law approach to dominance<sup>127</sup>.

Following an assessment of responses, the Commission, in its communication of April 26, 2000<sup>128</sup>, elaborated five key considerations, which were later developed into the five Directives, which formulated the current regulatory framework for telecommunications. In this context, it was decided that a single regulatory framework for communications infrastructure and associated services would be established

---

<sup>124</sup> Nonetheless, the document was criticised for failing to present a clear view as to how regulation should be structured and why. Refer to Sauter, W., *The Consultation on EU Regulation for Convergence* [1999] 1 Util. Law Rev., 5.

<sup>125</sup> European Commission, *Towards a new framework for Electronic Communications and Associated Services – The 1999 Communications Review*, COM 539 (final).

<sup>126</sup> Durie, R., Romer, J., *The impact of regulation on the mobile marketplace – Past, present and future*, [2002] CTLR, 96. The issue of excessive roaming charges is discussed in detail in Chapter 6.2.1.

<sup>127</sup> The introduction of such definition has received criticism on the grounds that the imposition of measures on dominant undertakings without prior review of potential abuses of dominance is not in compliance with competition law and, in fact, results in more regulation. Refer to the Opinion of the Economic and Social Committee on the 1999 Communications Review, [2000] OJ C204/3.

<sup>128</sup> European Commission, *Communication from the Commission: The results of the Public Consultation on the Communications Review 1999 and Orientations for the new Regulatory Framework*, COM (2000) 239 26 April 2000.

(horizontal approach to regulation). However, the new framework would distinguish between two types of regulation, depending on the level of competition. The first type would be designed for undertakings enjoying significant market power in markets where competition would be found not to be effective and the second type would be designed for all players.

The 2002 regime that followed the 1999 Communications Review and the results of the public consultation indicates a move towards competition law principles. The basic thrust of the Directives is that citizens' interests are best served by market forces and that regulation should be kept to a minimum<sup>129</sup>. Under such premise, it was decided to continue with asymmetric regulation through the establishment of rules governing the behaviour of undertakings enjoying significant market power, though with more reliance on competition law principles.

In March 2002 the European Parliament and the Council adopted four Directives on electronic communications, the Framework Directive<sup>130</sup>, the Universal Service Directive<sup>131</sup>, the Access Directive<sup>132</sup> and the Authorisation Directive<sup>133</sup>. These Directives together with the Directive on Privacy and Electronic Communications<sup>134</sup>, which was passed in the summer of the same year, formed the current regulatory package for electronic communications with effect from 25 July 2003. The Universal

---

<sup>129</sup> De Steel, A., *The new concept of "Significant Market Power" in Electronic Communications: the hybridisation of the sectoral regulation by competition law*, [2003] ECLR, 535-536.

<sup>130</sup> Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, [2002] OJ L 108/33.

<sup>131</sup> Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services, [2002] OJ L108/51.

<sup>132</sup> Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to and interconnection of, electronic communications networks and associated facilities, [2002] OJ L108/7.

<sup>133</sup> Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services, [2002] OJ L108/51.

<sup>134</sup> Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector, [2002] OJ L201/37.



Service Directive was revised by Directive 136/2009/EC<sup>135</sup> and the remaining Directives by Directive 140/2009/EC<sup>136</sup>.

The Framework Directive intended to establish a harmonised framework for the regulation of electronic communications networks and services, by setting out the policy objectives and the regulatory principles governing electronic communications operations in the Member States, by laying down tasks of national regulatory authorities and by establishing a set of procedures to ensure the harmonised application of the regulatory framework throughout the Community<sup>137</sup>.

On 11.9.2013, the Commission launched a Proposal for a Regulation laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, and amending Directives 2002/20/EC, 2002/21/EC and 2002/22/EC and Regulations (EC) No 1211/2009 and (EU) No 531/2012<sup>138</sup>. The Proposal intends to purport amendments to various important sections of the current framework, like the authorization regime, but not on the framework for the ex ante regulation of SMP.

As far as the Commission's intent to catch oligopolistic market structures, over and above monopoly situations, in the ambit of ex ante regulation in electronic communications is concerned, this is spelled out in the definition of SMP in electronic communications of Article 14 par. 2 of the Framework Directive:

“An undertaking shall be deemed to have significant market power if, either individually *or jointly with others*, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave

---

<sup>135</sup> Directive 2009/136/EC of the European Parliament and of the Council of 25 November 2009 amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws.

<sup>136</sup> Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities, and 2002/20/EC on the authorisation of electronic communications networks and services

<sup>137</sup> Article 1 of the Framework Directive.

<sup>138</sup> COM(2013) 627 final.

to an appreciable extent independently of competitors, customers and ultimately consumers” [emphasis added].

In other words, SMP regulation is designed to embrace single company dominance, joint dominance and the leverage of a dominant position on to an associated market. The definition of significant market power in Article 14 par. 2 of the Framework Directive clearly reflected the Commission’ s idea that sector-specific regulation should be reduced in favour of a stronger application of general competition law principles. The threshold for the imposition of *ex ante* rules is in the form of ‘significant market power’, which, compared with the previous regime, was redefined on the basis of the competition law concept of dominance<sup>139</sup>. Hence, *ex ante* obligations may only be imposed where undertakings are found to have a dominant position under competition law, coupled with incumbency or vertical integration, with the result that the *ex post* remedies of competition law would not be adequate to cure perceived market problems.

The following section discusses concerns that are associated with the setting of dominance as the threshold for *ex ante* intervention particularly in the context of oligopolistic environments.

### **1.2.3. Difficulties associated with the setting of dominance as the threshold for *ex ante* regulation**

Skepticism has grown on whether Article 102 of the Treaty provides an adequate basis for *ex ante* market regulation<sup>140</sup>. Doubt has been expressed on whether the findings of competition authorities in the context of alleged committed abuses of Article 102 may apply in *ex ante* approaches of dominance, on the grounds that NRAs rely on different sets of assumptions and expectations. The requirement that dominance be established implies a focus on the market structure that would pertain in the market under

---

<sup>139</sup> Brodey, M., *Telecommunications: Towards a new EU Regulatory Framework for Electronic Communications*, [2000] CTLR, 182.

<sup>140</sup> The Commission’ s policy to align its reasoning in merger cases in the findings of Article 102 cases has been cast in doubt because of the increased certainty and clarity inherent in assessing *ex post* behaviour in an oligopolistic market. Refer to Richardson, R., Gordon, C., *Collective Dominance: The Third Way?* [2001] ECLR, 420.

investigation, perhaps at the expense of other dynamic non-structural features of the scenario on the development of the market<sup>141</sup>.

The Commission acknowledges the differences between the assessment of power by an undertaking to affect competition for SMP regulatory purposes, and an *ex post* (Article 102) analysis of an effected market structure, in par. 73 of the Guidelines:

“In an *ex post* analysis, a competition authority may be faced with a number of different examples of market behaviour each indicative of market power within the meaning of Article [102]. However, in an *ex ante* environment, market power is essentially measured by reference to the power of the undertaking concerned to raise prices by restricting output without incurring a significant loss of sales or revenues”<sup>142</sup>.

Yet, dominance is a legal concept without any direct equivalent in economic theory<sup>143</sup>. Traditional economic theory supports that the structure of the market determines the firm’s conduct and that conduct determines market performance<sup>144</sup>.

European competition law has defined dominance as:

“a position of economic strength enjoyed by an undertaking which *enables* it to prevent effective competition being maintained on the relevant market by

---

<sup>141</sup> Similar criticism was expressed for the application of the dominance test under the former ECMR, Fountoukakos, K., Ryan, S., *ibid.*, 289. Doubts have been also expressed in the context of the efficient competitor test launched with the Commission Guidance on the former Article 82 (now Article 102 TFEU). The Guidance establishes the premise that, in general, only conduct which would exclude an “as efficient competitor” is abusive; the efficiency both of the firm under investigation and of its competitor may be measured with the use of cost pricing methods. This test, albeit suitable to apply in abuse of dominance cases, may be impractical when applied for *ex ante* sector-specific regulation in the electronic communications sector, because the focus should not be on the incumbent firm rather than the market itself. To take the efficiency of the incumbent as a criterion might lead to distortion in the market because of the inability of competitors to correctly observe the incumbent’s efficiency. Also, depending on the cost-control methodology imposed on the incumbent by sector-specific regulation, the level of regulatory costs might be fixed at a lower or higher level than actual costs. Stoyanova, M., *The Dangers of Over-Regulation in the Electronic Communications Sector*, [2007] World Competition, 112.

<sup>142</sup> Para. 73 of the Guidelines.

<sup>143</sup> Christensen, P., Rabassa, P., *The Airtours decision: Is there a new Commission approach to collective dominance?*, [2001] ECLR, 228.

<sup>144</sup> This is the famous “Structure – Conduct – Performance” or SCP paradigm of Bain, S., *Economies of Scale, Concentration and the Conditions of Entry in Twenty Manufacturing Industries*, [1954] 44 American Economic Review, 15. See also Jones, A., Sufrin, B., *EC Competition Law*, 2<sup>nd</sup> edition, 2004, 52.

affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of the consumers”<sup>145</sup>.

Hence, under European competition law, dominance has been defined by reference to the effect on competition and the exercise of market power independently of competitors, customers and consumers<sup>146</sup>. The definition has received criticism from economic scholars, who consider that the legal definition of dominance suffers from the weakness of not having a well-defined economic meaning or a well-defined standard of measurement, because no firm would set a price independently of its customers and a test of independence of competitors’ pricing is not possible<sup>147</sup>.

The ability to behave independently, namely the absence of competitive market pressure faced by an undertaking, has attracted a lot of attention in EC cases<sup>148</sup>; the reason for the emphasis may be that this feature corresponds most closely to the economic textbook definition of market power<sup>149</sup>. Bishop and Walker have defined dominance as

‘the ability of a firm or a group of firms to raise prices, through the restriction of output, and maintain them for a significant period of time above the level that would prevail under the competitive conditions and thereby to enjoy increased profits from the action’<sup>150</sup>.

This is the same statement repeated in par. 73 of the Guidelines, which was set out earlier. Nonetheless, the ability to affect competition is not in itself sufficient to establish anti-competitive behaviour, since Article 102 of the Treaty does not prohibit dominance but the abuse of it<sup>151</sup>.

---

<sup>145</sup> Case 27/76 *United Brands v. Commission* [1978] ECR 207.

<sup>146</sup> Discussion Paper, par. 21.

<sup>147</sup> Pearce de Azevedo, J., Walker, M., *Dominance: Meaning and Measurement*, [2002] ECLR 363-367. The opposite view has been expressed by la Cour, L., Mollgaard, H.P., *Meaningful and Measurable Market Domination*, [2003] ECLR, 132-135.

<sup>148</sup> Case 85/76 *Hoffmann La Roche v. Commission* [1979] ECR 461, par. 42-46. . In Case T-210/01, *General Electric v. Commission*, the GC ruled that the existence of lively competition on a market does not rule out the possibility that there is dominant position on that market, since the predominant feature of such market is the ability of the undertaking to behave independently of such competitors (par. 117).

<sup>149</sup> Newton, Ch., *Do Predators Need to be Dominant?* [1999] ECLR, 129.

<sup>150</sup> Bishop, S., Walker, M., *Economics of EC Competition law*, Sweet & Maxwell, London, 2006, 87.

<sup>151</sup> Weatherill, S., Beaumont, P., *EC Law*, 2<sup>nd</sup> edition, Penguin, 1995, 721f. However, in *Wanadoo*, the GC considered the *intention* to abuse a dominant position sufficient to establish an anti-competitive

Under Article 14 par. 2 of the Framework Directive, dominance is set as the threshold for SMP also in oligopolistic environments. We have seen in the first sections of this chapter that competition law has relied on the theory of tacit collusion, as opposed to the strict application of economic models of Cournot or Bertrand type for its approach to oligopolistic markets and on this theory has SMP regulation built its approach to oligopolistic markets.<sup>152</sup> Scholars have argued that the sole application of a static model such as the Cournot model may prove inefficient for the assessment of dynamic telecommunication markets which may lend themselves more easily to dynamic oligopoly theories, such as the theory of tacit collusion. In the model of Cournot competition, which leads to price equilibriums situated between marginal costs-pricing and monopoly pricing, oligopolists may achieve supra-competitive profits absent tacit collusion<sup>153</sup>.

Yet, the decision to regulate joint dominance in electronic communications *ex ante*, through the application of the dominance test, rests on the paradox that there is not a single Article 102 case precedent, where collective dominance was found to exist<sup>154</sup>. The analysis of the section 1.1.2 has shown that the concept of collective dominance was developed mainly in the context of merger cases, which suggests a lower evidence threshold due to *ex ante* speculation as opposed to the *ex post* proof, which seems more robust than *ex ante* speculation. The application of the stronger dominance test of Article 102 may not tally with the relaxation of the evidentiary burden after the Impala judgment.

---

scheme, Case T-340/03, *France Telecom v. Commission of the European Communities*, judgement of 30 January 2007.

<sup>152</sup> Some commentators suggest that the Cournot model may present a more appropriate tool for the calculation of joint dominance in *ex-ante* assessments on market power, compared with the theory of tacit collusion, on the grounds that that the Cournot type of analysis differs from the analysis of tacit collusion in that, at least theoretically, it specifies the market outcome that is to be expected in a given situation instead of offering a more open prediction that the market outcome will be anti-competitive, Camesasca, P., *ibid.*, 65. However, as in the case of every theoretical model, economic theory sets out specific factors for the application of the Cournot model, including product homogeneity, increased transparency with respect to prices and market demand, symmetry of market positions, as well as the stability and maturity of the market, Kloosterhuis, E., *ibid.*, 85-86.

<sup>153</sup> Petit, N., *ibid.*, at footnote 332. Conversely, scholars have argued that the application of the Cournot model still leaves room for application of the theory of tacit collusion, because the Cournot price lies below that of a perfect cartel or a monopolist and the difference between these levels indicates the scope for profitable collusion (Kloosterhuis, E., *ibid.*, 86).

<sup>154</sup> In none of the three Article 102 cases mentioned in section 1.1.2, i.e. *Italian Flat Glass*, *Laurent Piau and Efim v. Commission*, was there a finding of collective dominance.

Given the inevitable complexities inherent in the assessment of joint dominance, the high level of proof required for the establishment of joint dominance cases, creates doubts on whether there may be findings by NRAs on collective dominance in the long run under the SMP framework for electronic communications or there may be pleas on the absence of one condition discrediting in their entirety tacit collusion theories of harm. In a dynamic and forward-looking market analysis as in the case of the analysis requested by the Commission in the Guidelines, it is doubted whether any economic analysis would be able to provide the degree of certainty requested under Article 102. In principle, all future predictions entail a certain degree of uncertainty related to unforeseen events, which is enhanced by the fact that the factors establishing all economic theories may collapse. Support for this concern is lent by the following observations, which will be dealt with in detail in the chapters that follow.

First, the decision of the European Commission to regulate termination rates under single dominance principles, as a result of the delineation of termination markets on the separate networks of mobile and fixed operators. Such approach indicates the Commission's decision to have termination rates regulated *ex ante* as opposed to leaving such decision open to NRAs. Given that termination services could have been examined also from an oligopolistic perspective, had wider market definitions been adopted, such approach may also imply that the Commission was wary that NRAs could find ways out of regulation under tacit collusion principles. Notably, the Commission may have wanted to ensure that termination would be regulated anyway; conversely, it is possible that the Commission did not want to leave NRAs with the option of pleading that one or more factors necessary for the establishment of collective dominance did not apply, hence allowing SMP not being established and the market escaping regulation. The relevant discussion is found in chapter 2.

Second, the application of factors capable of establishing joint dominance by NRAs and the Commission, which shows that, in the course of implementation of the SMP framework, joint dominance is considered only on very rare occasions. In the period from 29.08.2003 to 30.09.2013 there have been four (4) decisions establishing collective dominance concerns in three wholesale markets: IE/2004/121, ES/2005/330, IT/2006/424 and MT/2006/443. The first was taken in 2005 and the other three in 2006. All of them were subsequently deregulated through subsequent market

assessments and since then no electronic communication market has been regulated as an oligopoly in the 28 member states. Back in 2008, in an analysis of collective dominance under the first round of market review, Hou assumed that the analysis of collective SMP in the second round market review would continue to appear in more competitive markets<sup>155</sup>. However, this did not prove to be the case. The assessment of market notifications effected under Article 7 of the Framework Directive reveals a significant reduction in the number of cases involving collective dominance from 21 notifications in 2006 to 2 in 2010, none in 2011, 2 in 2012 and none in 2013. Of course, a complete analysis of the relevant national markets would be required in order to support the existence of collective SMP in any electronic communications market in any of the 28 member states and such analysis has not been undertaken in the context of this thesis. However, the observation remains that not only are there no findings on collective SMP, but also lack of notifications involving the assessment of prospective collective SMP, which shows the lack of concerns in the presence of a second wholesale operator. The relevant analysis is made in chapter 3.

It is noted that BEREC shares the analysis of different economic papers on the potential insufficiency of two competing networks to achieve effective competition and recognizes the necessity to review the criteria to assess joint SMP, in particular via an update of the Guidelines to cover the latest competition law developments and to assess clearly complexities associated with duopolies in electronic communication markets<sup>156</sup>.

Third, the careful reading of the history behind roaming regulation may support the assumption that the SMP regulation has possibly failed to address issues of collective dominance in wholesale roaming markets, hence the decision of the European Commission to regulate roaming through a separate regulation. The NRAs of the 12 member states that carried out their assessments of the respective wholesale roaming markets declared themselves unable to prove the existence of collective SMP, albeit they all recognised the existence of high rates and the majority accepted the existence of factors indicating collective dominance in the market, whereas some of them

---

<sup>155</sup> Hou, L., *The assessment of collective SMP: Lessons learned from the first market review*, December 1<sup>st</sup>, 2008, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1309684](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1309684)

<sup>156</sup> BEREC's response to the European Commission's questionnaire for the public consultation on the revision of the Recommendation on Relevant Markets BoR (13) 22, at p. 3.

accepted the potential existence of joint SMP in the short term. This observation is particularly interesting if one considers the risk of future collusion between the few operators active in the different Member-States for the provision the same bundled products, should the plan of the Commission for the development of a single European concentrated market with one legislation, one licensing system and one spectrum policy materialize. This subject is presented in chapter 4.

The same chapters, as well as the last two chapters on remedies attempt also to give some guidelines on the application of the SMP framework in oligopolistic electronic communications markets.



# Chapter 2: Market delineation under the SMP regime: is there any room left for oligopoly regulation?

---

## 2.1. Defining product markets in electronic communications

Market delineation is fundamental to the establishment of any market power in electronic communications and to the proper application of the relevant regulatory framework. If the definition of the product and/or geographic market is too broad, the establishment of dominance of any kind may be rendered remote. If the product and/or geographic market is too narrow, then a finding of dominance where such case does not exist may lead to the imposition of unnecessary regulatory burdens and restrictions in the conduct of the firms with the utmost result against the development of the market. In both cases, the efficiency of the regulatory approach in relation to market power in electronic communications is prejudiced, because it fails to meet the objective of its existence, i.e. the regulation of market power only where such power risks to affect artificially the competition forces of the market and/or to prejudice consumer interests.

The purpose of this chapter is to examine the Commission's choices on market delineation in electronic communications in relation to the application of *ex ante* measures aiming at the constraint of anti-competitive practices through SMP regulation. The chapter will show that the Commission mainly directs NRAs towards narrow market definitions, which renders the inclusion of oligopolistic situations in SMP regulation considerably difficult. The review of the Commission's choices on markets susceptible to *ex ante* regulation will show that the Commission has placed little emphasis on oligopolies. Rather, through the delineation of markets susceptible to

*ex ante* regulation, the Commission's main concern is the setting of limitations to anti-competitive behaviour of monopolists.

The review commences with the description of general principles of competition law on market definition with indications on issues affecting oligopolistic markets and on technology issues affecting market definition in electronic communications and turns into the examination of the specific markets defined for the purposes of SMP regulation. The chapter makes suggestions for the revision of these pre-defined markets, which allow the covering of situations of joint dominance in electronic communications and gives guidelines that assist the proper market delineation in concentrated markets with few players.

### **2.1.1. The significance of market delineation for competition law purposes**

Market delineation is a condition precedent to the calculation of market power, as anti-competitive effects, whether caused by abuse of dominance, concentration or agreements between undertakings are assessed by reference to a particular market<sup>157</sup>. The main purpose of market definition is to identify in a systematic way the competitive constraints that the undertakings involved face. The relevance for dominance cases is that the broader the market, the less likely the finding of dominance<sup>158</sup>.

Commission Notice on the definition of relevant market for the purposes of Community competition law<sup>159</sup> (the "Notice") defines the "relevant product market" and the "relevant geographic market" as follows:

‘A relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the product's characteristics, their prices and their intended use’.

‘The relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of relevant

---

<sup>157</sup> Jones, A., Suffrin, B., *EC Competition Law*, OUP, 2004, 299.

<sup>158</sup> *Ibid.*

<sup>159</sup> OJ 1997 C 372/5.

products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from the neighbouring geographic areas because, in particular, conditions of competition are appreciably different in those areas'<sup>160</sup>.

The Notice also summarises the suggested test, as follows:

‘Basically, the exercise of market definition consists in identifying the effective alternative sources of supply for the customers of the undertakings involved, in terms both of products/services and of geographic location of suppliers’<sup>161</sup>.

Firms are subject to three main sources of competitive constraints: demand side substitutability, supply side substitutability and potential competition. This test of ‘substitutability’ measures the extent that a product can be substituted by another product both on the demand and on the supply side (demand substitution and supply substitution), also by reference to short- to medium-future predictions of market structure (potential competition). Geographic markets are identified by reference to their homogeneity and their ability to be discerned from neighbouring areas<sup>162</sup>.

Supply substitution is defined in economic literature as

“the possibility of an undertaking that does not sell a given product being able to start producing and selling that product in the short term without having to invest significant amounts in order to adapt its production facilities”<sup>163</sup>.

The Commission has identified product markets on the basis of supply substitution, where demand substitution was found not to exist. For example, in *Torras/Sarrio*<sup>164</sup>, despite the lack of substitutability between writing papers of different quality from a consumer point of view, the Commission has identified a single writing paper market,

---

<sup>160</sup> Paragraphs 7 and 8 of the Notice respectively.

<sup>161</sup> *Ibid.*, par. 13.

<sup>162</sup> Case 27/76, *United Brands Co and United Brands Continental BV v. Commission* [1978] ECR 207, par. 11 and 44.

<sup>163</sup> Navarro, E., Font, A., Folguera, J., Briones, J., *Merger Control in the EU, Law, Economics and Practice*, OUP, 2002, 91.

<sup>164</sup> [1992] Case IV/M 166.

on the grounds that paper manufacturers can switch from producing one quality of paper to another almost immediately<sup>165</sup>.

As for the third source of competitive constraint, potential competition, the Commission cites in the Notice that this

‘is not taken into account when defining markets, since the conditions under which potential competition will actually represent an effective competitive constraint depend on the analysis of specific factors and circumstances related to the conditions of entry. If required, this analysis is only carried out at a subsequent stage, in general once the position of the companies involved in the relevant market has already been ascertained, and when such position gives rise to concerns from a competition point of view’<sup>166</sup>.

In practice, supply substitution plays a minor role in market definition process, whereas potential competition is not measured at all, i.e. the bulk of the analysis is related to demand substitutability<sup>167</sup>. Demand side substitution constitutes the most immediate and effective disciplinary force on the suppliers of a given product, in particular in relation to their pricing decisions, but supply side substitution is also required in order to establish relevant market. The weakest competitive constraint, potential competition, will usually be assessed at the later stage of the competitive assessment<sup>168</sup>.

The Notice indicates that demand substitution will be effected by recourse to the hypothetical monopolist test, which measures the effects that a small (5% - 10%) but significant lasting increase in the price of a given product has, assuming that the prices of all other products remain constant<sup>169</sup>. The hypothetical monopolist test of the Notice

---

<sup>165</sup> For the significance of customers’ switching costs as an element of product market definition refer to Willis, P., *When is a Market not a Market? Secondary Markets in the IT and Telecommunications Sectors*, [2002] CTLR, 170-173.

<sup>166</sup> The Notice, par. 24.

<sup>167</sup> Hildebrand, D., *Using Conjoint Analysis for Market Definition: Application of Modern Market Research Tools to Implement the Hypothetical Monopolist Test*, [2006] *World Competition*, 316. Potential competition has been taken into account for product market definition purposes in Case IV/M.1225, which involved the merger between *Enso* and *Stora*, [1999] OJ L254, par. 40.

<sup>168</sup> Competition Committee, Directorate for Financial and Enterprise Affairs, *Roundtable on market definition*, DAF/COMP/WD(2012)28, at p. 3.

<sup>169</sup> The Notice, par. 17.

indicates a move closer to the SSNIP test<sup>170</sup> adopted by the US Merger Guidelines<sup>171</sup>, although a number of scholars considers the two tests equivalent<sup>172</sup> and a move away from the traditional test of “functionable interchangeability” defined by the ECJ in *Hoffman-La Roche*<sup>173</sup>, determining which products are sufficiently similar in function, price and attributes to be regarded by consumers as reasonable substitutes for each other<sup>174</sup>.

Economists support that own-price and cross-price elasticities are decisive in evaluating whether a price increase of a hypothetical monopolist would be profitable or not and hence how to define the relevant market, as the eventual change in the profit of a hypothetical monopolist after a price increase can only be answered empirically<sup>175</sup>. However, a problem with the hypothetical monopolist test is that it cannot identify whether the current price is already a monopoly price resulting from the exercise of market power<sup>176</sup>. This is generally known as the “cellophane fallacy”, named after a US antitrust case, where the Supreme Court failed to recognise that the consumers’ willingness to substitute cellophane with other flexible wrapping materials was due to the consumers’ inability to afford an increase in cellophane, because prices were already set well above the competitive level<sup>177</sup>.

The Cellophane Fallacy has been claimed to be only part of a general problem for the application of the hypothetical monopolist test, which arises whenever the prices the

---

<sup>170</sup> SSNIP stands for a small but significant non-transitory increase in price.

<sup>171</sup> Issued by the US Department of Justice and the Federal Trade Commission in 1992 and revised in 1997. Available at [www.usdoj.gov/atr/public/guidelines/hmg.htm](http://www.usdoj.gov/atr/public/guidelines/hmg.htm)

<sup>172</sup> Refer, e.g. to Kokkoris, I., *The Concept of Market Definition and the SSNIP Test in the Merger Appraisal*, [2005] ECLR 209f. The main differences between the two tests lie in the time-frame of the increase (“non-transitory”, as opposed to “lasting”) and in the definition of “small” increases (only 5% in the SSNIP). The SSNIP test judges the profitability of a small but significant and non-transitory increase in price. The relevant product is the smallest set of products for which a hypothetical monopolist would find it profitable to increase prices by 5%, Camesasca, P., *European Merger Control: Getting the Efficiencies Right*, Intersentia Hart, London 2000, 86.

<sup>173</sup> *Hoffman-La Roche vs. Commission*, Case 85/76, [1979] ECR, 461.

<sup>174</sup> The concept of functionable interchangeability had been discarded by antitrust practice for not projecting a very reliable vision of reality and does not allow one to define the boundaries of the relevant market, because it gives no information about the profitability of a particular price increase, Camesasca, P., *ibid.*, 91.

<sup>175</sup> Hildebrand, D., *ibid.*, 315-336.

<sup>176</sup> Jones, A., Suffrin, B., *ibid.*, 57.

<sup>177</sup> *United States v. E.I. du Pont de Nemours & Co*, 118 F. Supp. 41 (D. Del 1953).

test is applied to do not reflect competitive conditions, including ‘too low’ prices<sup>178</sup>. That would be the case, for example, of markets suffering from over capacity, where prices may be set below short or long-run incremental average costs, or of monopolists engaging themselves in predatory pricing. In this case, the result would most likely be that the test delineates relevant markets too large either in the product or in the geographic dimension<sup>179</sup>. BEREC has identified possible cellophane fallacy effects on deeply discounted bundles of multiple offerings (fixed telephony, internet, mobile and broadcasting), since consumers may be unlikely to unpick the bundle as a result of the price increase<sup>180</sup>.

Conversely, where market power appears to be absent but an entity has very high market share, it places an additional burden on the parties to define correctly the relevant product market. Where concentration is very high and prices are not statistically different to those in other areas where concentration is low, this can suggest that either the market has been drawn too narrowly, or that the market is subject to ‘hit and run’ entry or firms in nearby markets are able to switch capacity fairly easily<sup>181</sup>.

The issue of the correct starting price and thus of the possible cellophane fallacy is claimed to be more relevant in abuse of dominance cases than in merger cases where the prevailing price of the product produced by the merging entities is taken as the starting point<sup>182</sup>. In oligopolistic markets, the problem may be even more acute, because the existence of tacit collusion may act as a deterrent in the detection of anti-competitive prices and the involvement of more market players in the anti-competitive behaviour provides faulty indications as to the competitiveness of prices for the same product. Failure to capture the oligopolistic nature (and interactions) of many markets might lead the SSNIP test to define markets too narrowly, and often dominant groups as monopolists rather than oligopolists. This may have been the case in the designation of separate termination markets on the individual networks of each operator, which is

---

<sup>178</sup> Croscioni, P., *The Hypothetical Monopolist Test: What it can and cannot tell you*, [2002] ECLR, 354f.

<sup>179</sup> Olesen, H., Sundahl, L., *The Power Fallacy: Energizing the Cellophane Fallacy*, [2006] ECLR 704.

<sup>180</sup> BEREC Report on impact of bundled offers in retail and wholesale market definition, BoR (10) 64, 13.

<sup>181</sup> Hildebrand, D., *ibid.*, 321. Benchmarking, i.e. comparison with the prices charged for the same product in other geographic markets, has been suggested as a solution to this problem.

<sup>182</sup> Kokkoris, I., *ibid.*, 212.

discussed in section 2.2.2.2 below. Harbord and von Graevenitz take the view that the ‘oligopoly problem’ is related to the ‘Cellophane fallacy’, save that the fallacy is in the opposite direction. Put simply, a monopolist of product A could well be found to have profitably increased the price of A by a SSNIP. However, in an oligopolistic market such price increase would lead also competitors to respond by raising price: assuming “the terms of sale of all other products” constant, we would infer that the producer of A is a monopolist<sup>183</sup>.

Although the Commission has identified the cellophane fallacy problem in its Guidelines on market definition and the assessment of market power (the “Guidelines”)<sup>184</sup>, the existence of deterrents in the detection of anti-competitive prices created under oligopolistic conditions is not addressed in their text.

Within the context of the hypothetical monopolist or the SSNIP test economists support that own-price and cross-price elasticities are decisive in evaluating whether a price increase of a hypothetical monopolist would be profitable or not and hence how to define the relevant market, as the eventual change in the profit of a hypothetical monopolist after a price increase can only be answered empirically<sup>185</sup>. Several econometric methods have been developed to provide such empirical analysis<sup>186</sup>, with the most common being Critical Loss Analysis, which intends to provide answers quantitatively on how elastic demand must not be, for the candidate market to be an antitrust market<sup>187</sup>.

---

<sup>183</sup> Harbord D., von Graevenitz, G., *Market Definition in Oligopolistic and Vertically-Related Markets: Some Anomalies*, [2000] ECLRev, 21:3.

<sup>184</sup> Commission Guidelines on Market Analysis and the Assessment of Significant Market Power under the Community Regulatory Framework for Electronic Communications Networks and Services, [2002] C 165/02, par. 42.

<sup>185</sup> Hildebrand, D., *Using Conjoint Analysis for Market Definition: Application of Modern Market Research Tools to Implement the Hypothetical Monopolist Test*, [2006] World Competition, 315-336.

<sup>186</sup> Econometric techniques that are based on historical data, like price correlation over time, have not been considered credible options because they are backward-looking, and thus define markets as they were in the past. Price-concentration studies examine how the price of a product in a distinct area varies according to the number of other products sold in the same area. Hildebrand (*ibid.*) has suggested conjoint analysis as well suited to estimate the effects of a hypothetical price increase on demand and hence on profits of a firm for the implementation of the hypothetical monopolist test. It is an empirical method that examines the benefit a product represents for the customer and values it. It is based on the premise that relative utilities of certain product features might not be measurable if considered separately but that a joint consideration of the different product features will reveal the relative utilities of the distinctive features.

<sup>187</sup> Critical Loss Analysis has been used also by NRAs in their market assessments under Article 7 of the Framework Directive, e.g. in PT/2008/0850 on Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location, where ANACOM argued that the

As an alternative to the hypothetical monopolist test, economic literature has put forward the concept of Upright Pricing Pressure (UPP), especially in merger cases, which focuses on the value of the diverted sales as a result of the number of units diverted multiplied by the margin between price and incremental cost on that product<sup>188</sup>. A higher UPP as the result of higher diversion ratios and/or higher margins can indicate a significant change in the pricing incentives. The UPP method is very close in spirit to other methods focusing on the elasticity of demand and closeness of substitution as it heavily relies on the concept of diversion ratios. However, it reinterprets the difference in pricing incentives between the single firm and the independent firms from the cost side, in particular, from the angle of opportunity costs<sup>189</sup>.

Whereas the Commission's Guidelines on Horizontal Mergers do not explicitly refer to the UPP concept, they do refer expressly to the use of diversion ratios and mention that high pre-merger margins may make significant price increases more likely<sup>190</sup>. Nonetheless, it is generally acknowledged even in the US, which pioneered the application of UPP in antitrust analysis, that albeit UPP may be a useful tool, it cannot replace the need for traditional product market definition<sup>191</sup>. Not only is the concept of market definition inherent in the EU Merger Control Regime, it is in practice in most cases significant less time and data intensive to define the relevant market and calculate the market shares than perform an UPP analysis. Additionally, UPP is only one additional element of evidence for the analysis of substitution and merger effects with strength and weaknesses between other qualitative and quantitative evidence. It can therefore only be one "additional piece in the puzzle"<sup>192</sup>.

---

elasticity of the demand at the retail level is high, and that the barriers to switching are low; and that there was a tendency for increased retail competition between DSL and cable-based broadband offers following the spinoff of the main cable operator, ZON Multimedia, from the PT Group. Therefore, the NRA considered that a price increase at the wholesale level for DSL would turn out to be unprofitable, hence offers supported on ADSL and cable can be included in the same market.

<sup>188</sup> The UPP test has been applied also in recent merger cases also in the telecommunications sector, like Case M. 6497/Hutchinson 3GAustria/Orange Austria.

<sup>189</sup> Competition Committee, *ibid.*, at footnote 36.

<sup>190</sup> Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentration between undertakings, [2004] OJ C 31/5, par. 28-29.

<sup>191</sup> Refer to the relevant analysis in par. 344f. of Case M. 6497/Hutchinson 3GAustria/Orange Austria.

<sup>192</sup> Competition Committee, *ibid.*, at p. 9.



With the foregoing background in mind, we shall now discuss the extent to which technology affects product market definition in electronic communications in so far as it may be of relevance in the context of oligopolistic markets.

### **2.1.2. The influence of technology on product market definition in electronic communications**

The methodology for defining technology markets follows generally the same principles as the definition of product markets. However, it can be more difficult to compare technologies, to assess their substitutability or to take into account technologies that are currently only used in-house and/or are not or only to a very limited extent being licensed. Similarly, it may be more difficult to calculate market shares on a technology market<sup>193</sup>. Telecommunications is a technology-driven sector and the advances of technology have enabled operators to provide a variety of services. The Commission has recognised the significance of technological features in product market delineation since the 1991 Guidelines on the application of ICC competition rules in the telecommunication sector<sup>194</sup>.

In the early days of telecommunications law, the Commission was considered to have defined relevant product markets somewhat broadly, relying to a great extent on customer substitutability as a guide, without attaching too much importance to technological issues<sup>195</sup>. Hence, in *Inmarsat*<sup>196</sup> and in *Iridium*<sup>197</sup>, the Commission found that satellite personal communication systems

“are expected to act as a complement to both GSM and digital cordless telephony within fixed radius (DECT) wireless terrestrial mobile technologies. This will be particularly the case in areas where the cellular network has failed to penetrate (namely rural parts of the developed world

---

<sup>193</sup> Competition Committee, *ibid.*, at p. 8.

<sup>194</sup> [1991] OJ C233/2, pars 26-30.

<sup>195</sup> Larouche, P., EC Competition Law and the Convergence of the Telecommunications and Broadcasting Sectors, (1998)22 Telecommunications Policy, 230.

<sup>196</sup> [1995] OJ C304/6, section IV.1 of the decision.

<sup>197</sup> Commission Decision of 18.12.1996, *Iridium* [1997] OJ L16/87.

and both urban and rural parts of lower income countries) or where terrestrial roaming is not available, because of incompatible technologies”.

The Commission also examined the differences in satellite systems resulting from varieties in orbital positions (LEO, MEO and GEO systems) in order to assess the existence of sub-markets within the satellite personal communications market. Although a negative conclusion was reached, the Commission did not preclude such approach in the long term, depending on the specificities of the system to be developed<sup>198</sup>.

In *MSG*<sup>199</sup> and *NSD*<sup>200</sup>, two landmark decisions in the broadcasting sector, although decided at approximately the same period as *Inmarsat* and *Iridium*, distribution of signals via satellite was distinguished from distribution through terrestrial links on the premise of considerable differences that were found to exist between the two modes of distribution both technically and financially<sup>201</sup>.

In *British Interactive Broadcasting/Open*<sup>202</sup>, the Commission noted that for the provision of basic voice services to consumers, the relevant infrastructure market included not only the traditional copper network of BT but also the cable networks of the cable operators, which were capable of providing basic telephony services, and possibly wireless fixed networks. In *Nortel/Norweb*<sup>203</sup>, the Commission recognised that electricity networks using Digital Power Line technology could provide an alternative to existing traditional local telecommunications access loop. In both cases, the responses collected from industry players accorded with this approach.

---

<sup>198</sup> *Ibid.*, par. 28.

<sup>199</sup> Commission Decision of 9.11.94, Case IV/M.469, *MSG Media Service* (1996) OJ L364/1.

<sup>200</sup> Commission Decision of 19.7.1995, Case IV/M.490, *Nordic Satellite Distribution* (1996) OJ L 53/20, par. 57.

<sup>201</sup> As far as traditional broadcasting services are concerned, merger authorities continue to define different television broadcasting markets by reference to the platform applied for the transmission of the signal, refer to Macquarie UK Broadcast Ventures Limited/ National Grid Wireless Group, Clearance of 11.3.2008 at [www.competition-commission.org.uk](http://www.competition-commission.org.uk).

<sup>202</sup> Case No IV/36.359, [1999] OJ L 312, par. 33-38.

<sup>203</sup> Case No IV/M.1113, par. 28-29.

Since the late nineties, product market delineation on the basis of technology was regarded as inflexible<sup>204</sup> and unstable because of the rapid advances of the same, especially with a view to the advent of digital era<sup>205</sup>. The disassociation of the services from the type of network over which they are supplied has developed the principle of platform independence or the principle of technological neutrality and resulted from the phenomenon of convergence of networks and services. In fact, platform independence has contributed to the establishment of the current single regulatory framework for electronic communications<sup>206</sup>. According to the definition of the principle in recital 18 of the Framework Directive, the principle contains a prohibition of discrimination and the associated consequence that regulation should not pre-empt market outcomes on the basis of (evolutionary) technologies<sup>207</sup>.

In the Guidelines, the Commission does not preclude market definition of products destined for end users on the basis of the physical characteristics of networks over which the services are rendered, but it recognises that the purpose of the services is the most decisive element<sup>208</sup>. The Guidelines also set out the principle that access markets should be platform independent, in that they should comprise all types of infrastructure that can be used for the provision of a given service<sup>209</sup>. The broadening of market definition pursuant to the principle of platform independence reveals that alternative technologies can have the ability to lower market entry barriers, which are one of the

---

<sup>204</sup> Larouche, P., *Competition Law and Regulation in European Telecommunications*, Hart Publishing, London, 2000.

<sup>205</sup> Grewlich, K., *"Cyberspace": Sector-specific Regulation and Competition rules in European Telecommunications*, [1999]36 CMLRev., 942.

<sup>206</sup> As stated in recital 5 of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, [2002] OJ L 108/3 (the Framework Directive), the convergence of the telecommunications, media and information technology sectors means all transmission networks and services should be covered by a single regulatory framework. Refer also to the definition of "electronic communications network" in Article 2a of the Framework Directive, i.e. transmission systems and, where applicable, switching or routing equipment and other resources which permit the conveyance of signals by wire, by radio, by optical or by other electromagnetic means, including satellite networks, fixed (circuit- and packet-switched, including Internet) and mobile terrestrial networks, electricity cable systems, to the extent that they are used for the purpose of transmitting signals, networks used for radio and television broadcasting, and cable television networks, irrespective of the type of information conveyed.

<sup>207</sup> Rec. 18 quotes: 'The requirement for Member States to ensure that national regulatory authorities take the utmost account of the desirability of making regulation technologically neutral, that is to say that it neither imposes nor discriminates in favour of the use of a particular type of technology, does not preclude the taking of proportionate steps to promote certain specific services where this is justified, for example digital television as a means for increasing spectrum efficiency'.

<sup>208</sup> Paragraph 45 of the Guidelines.

<sup>209</sup> Paragraph 67 of the Guidelines.

three factors necessary for the pre-definition of any market susceptible of ex ante regulation, as set out in the following section. Hence, this means that the broadening of market definition pursuant to the principle of platform independence may imply that regulation will not be necessary<sup>210</sup>.

On the other hand, platform independence is particularly significant for the definition of oligopolistic markets, because it precludes the narrowing of the market per type of network and allows the prospective inclusion in the same service market of operators providing similar services over different types of network, thus allowing a wider view on possibly emerging technologies also<sup>211</sup>. The opening up of the digital dividend spectrum for different services is further demonstration of the principle of platform independence, since it creates an opportunity particularly for wireless broadband network operators to gain valuable radio spectrum, and in turn reinforces competition in the provision of broadband services. For market definition purposes this means that broadband services offered via any of the abovementioned technology will form part of the same market. In April 2011, the Commission set out the technical parameters allowing for the co-existence of GSM and 3G with either LTE or WiMAX based 4G technology<sup>212</sup>.

In its response to the European Commission's questionnaire for the public consultation on the revision of the Recommendation on Relevant Markets<sup>213</sup>, BEREC identified the roll-out of LTE, the upgrade of cable infrastructure and the deployment of fibre as major technological developments affecting market definition in electronic communications markets, i.e. the substantial increase in inter-platform competition, with the upgrade of cable technologies and local fibre deployment. Furthermore, BEREC noted the increasingly substantial use of broadband, which has resulted in an

---

<sup>210</sup> Kamecke, U., Korber, T., *Technological Neutrality in the EC Regulatory Framework for Electronic Communications: A Good Principle Widely Misunderstood*, [2008] ECLR, 333.

<sup>211</sup> *Ibid.* It is important to understand that the term convergence does not refer to the networks themselves, but to the services provided over the different networks.

<sup>212</sup> Commission implementing decision of 18 April 2011 amending decision 2009/766/EC on the harmonisation of 900 Mhz and 1800 Mhz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community, [2011] OJ L 106/9. National administrations were obliged until 31<sup>st</sup> December 2011 to implement the Decision into their national rules so that GSM bands are effectively made available for LTE and WiMAX systems.

<sup>213</sup> BoR(13) 22.

increase in the supply and demand of services and applications via the internet, including Over-The-Top (OTT) services, whereas IP technology is taking over circuit switched networks with particular implications for fixed telephony services.

In relation to wholesale broadcasting transmission services, despite their removal from the list of markets susceptible to *ex ante* regulation, as a result of the transition from analogue to digital platforms<sup>214</sup>, studies have shown that in case of failure on the market for managed transmission services (e.g. transmission operators charge abusive prices to broadcasters), depending on the existence of a prospect for intra-platform competition for the provision of broadband services, remedies should be imposed either on the market for access to network elements (if there is prospect for intra-platform competition) or on the market for managed transmission services (if market analysis shows that such prospect does not exist)<sup>215</sup>. If there is a prospect for intra-platform competition, there may also be a prospect of collusive behaviour between undertakings operating on different platforms<sup>216</sup>.

## **2.2. Defining product markets for SMP regulatory purposes**

### **2.2.1. The method of pre-definition**

On examining competition law cases, particularly in the context of mergers, the Commission and the ECJ have defined a significant number of markets in the telecommunications sector, including separate markets for network access and services, voice and data/ Internet markets, mobile services, terminal equipment etc.<sup>217</sup>.

---

<sup>214</sup> Nonetheless, there have been notifications assessing the relevant market, like e.g. FR/2012/1354.

<sup>215</sup> Cullen International, *Study on the Regulation of Broadcasting Issues under the New Regulatory Framework*, prepared for the European Commission, 22.12.2006, 121-123.

<sup>216</sup> However, at the time of the study (*ibid.*, 123), only France had succeeded in introducing intra-platform competition and spectrum assignment which was authorised through the 2009 reform package is expected to facilitate such form of competition in broadcasting services.

<sup>217</sup> E.g. only in *Telia/Telenor* (Commission decision of 13 December 1999, Case IV/M.1439) the Commission defined fourteen separate markets, for local calls with the use of switch fixed telephony segment, long distance calls with the use of switch fixed telephony segment, international calls with the use of

The 2002 regulatory framework does not direct National Regulators (NRAs) towards complete market analysis in electronic communications. On the contrary, for homogeneity purposes in the regulation of SMP throughout the EU, the Commission has opted in favour of the pre-definition of the relevant electronic communication markets at Community level. Article 15 par. 1 of the Framework Directive, provides that the electronic communication markets, which may justify the imposition of regulatory measures, are set out by the Commission in a Recommendation. The Commission also reserves veto rights as to the decision by NRAs to define different product markets or to impose sector-specific regulatory obligations on markets other than those identified in the Recommendation.

The accurate product and geographic dimension of a market identified in electronic communications for SMP regulation depends on the proper gathering of all necessary information, findings and studies commissioned or relied upon by NRAs in exercising their regulatory tasks. The Guidelines point out that in preparing to carry out a market analysis, NRAs will collect all the necessary information from the widest possible range of sources. Article 5.1 of the Framework Directive provides that member states shall ensure that undertakings providing electronic communications networks and services provide all the information necessary for NRAs to ensure conformity with

---

switch fixed telephony segment, calls from fixed to mobile, mobile telephony, operator access to local loop networks, operator access to long distance or international networks, business data communications, ISP services, wholesale ISP services, Internet advertising, sale of advertising space in local telephone directories, sale of advertising space in business-to-business directories and PABX distribution. The Commission has also defined separate markets for optical network products, broadband access solutions, S/R equipment, narrowband switches (Case No COMP/M.4214, *Alcatel/Lucent Technologies*, 24.7.2006), for cable CPEs and digital set-top boxes (Case No. COMP/M.4063, *Cisco/Scientific Atlanta*, 22.2.2006), mobile network equipment, network access network equipment, core-network access equipment, transport and IP network equipment (Case No COMP/M.4297, *Nokia/Siemens*, 13.11.2006), etc.

Community law. Furthermore, Article 11 of the Authorisation Directive provides that undertakings can be required by the terms of their general authorisation to supply the information necessary for NRAs to conduct a market analysis within the meaning of Article 15.2 of the Framework Directive.

Hence, accurate market identification for regulation for SMP purposes depends to a great extent on the education, resources, skills and competence of the staff employed by the NRAs. Market definition is not a mechanical or abstract process but requires an analysis of any available evidence of market behaviour and an overall understanding of the mechanics of a given sector. It has been pointed out correctly that the effectiveness of a competition law regime depends at least as much on administrative skills (the training and skills of the staff involved) as on the strength of the underlying legislation<sup>218</sup>. One assumes that the list was needed to fill gaps in NRAs' competences and accelerate convergence of regulatory approaches, at the same time ensuring a degree of control in the hands of the Commission<sup>219</sup>.

The first Recommendation, issued on 13.5.2003 described 18 product markets and was revised in December 2007 to reduce the number of markets susceptible to *ex ante* regulation to seven wholesale and one retail market<sup>220</sup>. According to the Draft Revised Recommendation issued on September 30, 2013, the number of markets susceptible to *ex ante* regulation is reduced further into four wholesale markets<sup>221</sup>. Any other market analysis for the purpose of imposing additional measures to SMPs should be justified by exceptional circumstances that apply in that particular member state and be subject to the Commission' s approval as per Article 7 par. 4 and 5 of the Framework Directive.

---

<sup>218</sup> Pitt, E., Telecommunications Regulation: Is it realistic to rely on competition law?, [1999] E.C.L.R. 247-248.

<sup>219</sup> Ecorys, Final Report commissioned for DG Connect: *Future electronic communications markets subject to ex ante regulation*, Rotterdam, 18.09.2013, (the "Final Market Report for DG Connect") 383.

<sup>220</sup> Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services, [2007] OJ L344/65. In October 2012 the Commission launched consultation procedures for the review of the Recommendation, <http://ec.europa.eu/digital-agenda/en/news/public-consultation-revision-recommendation-relevant-markets>.

<sup>221</sup> Available at <http://ec.europa.eu/digital-agenda/en/news/draft-revised-recommendation-relevant-markets>.

In the early days of telecommunication regulation, the Commission has adopted in its Guidelines on the application of EEC Competition rules in the Telecommunications sector, the view that, as a result of rapid advances of technology and changes in market conditions,

“any current market definition runs the risk of becoming inaccurate or irrelevant in the near future”<sup>222</sup>.

However, subsequent regulatory approaches favoured the pre-definition of relevant markets in establishing obligations for organisations with significant market power. E.g. in relation to interconnection, the relevant markets for the purposes of assessing significant market power were specified in the Interconnection Directive as fixed public telephone networks and services, leased line services and public mobile networks<sup>223</sup>. The rapid advances of technology and market conditions in the telecom sector was the reason for such predefinition of relevant markets in legislation, which were, nonetheless, criticised as unable to form the basis of any reliable and enduring assessment of market power in compliance with economic theory and competition law practice<sup>224</sup>.

The Commission decided to remain with such regulatory practice, to ensure harmonisation and legal certainty throughout European markets<sup>225</sup>. Although such decision may seem justified in the light of control of over-regulation, it is in potential conflict with the Commission’s decision to approach regulation of SMPs in accordance with general competition law principles and the flexibility inherent in such approach<sup>226</sup>. Although there should not be significant deviations from state to state in the list of most commonly used product markets, product market definition may be found to depend on specific conditions, which differ from state to state, such as primarily legal, statutory or other regulatory requirements, but also on specific customer preferences and habits and the structure of the market itself. Article 15 par. 1 of the Framework Directive does not preclude market delineation on the basis of such specific characteristics, but regards it as a more remote possibility.

---

<sup>222</sup> Par. 54.

<sup>223</sup> Annex I to Directive 97/33/EC.

<sup>224</sup> Taylor, M., European Commission’s Draft Guidelines on Market Analysis, [2001]6 CTLR 130.

<sup>225</sup> European Commission, Explanatory Note, SEC [2007] 1483 final.

<sup>226</sup> Articles 14 f of the Framework Directive provide explicit instructions to the Commission to define relevant product markets in accordance with the general principles of competition law.



Three months after publishing the 2002 Directives in the Official Journal and, in particular, on 11.7.2002, the Commission released the Guidelines (on Market Analysis) with the purpose of assisting NRAs in analysing whether a given product or service market is effectively competitive in a given geographical area, including an analysis as to whether the market is prospectively competitive, and thus whether any lack of effective competition is durable<sup>227</sup>. Given the aforementioned restraints of the Framework Directive in relation to product market definition by NRAs, the significance of the Guidelines at market definition level is twofold: the delineation of the accurate geographic scope of the markets of the Recommendation and the existence of exceptional circumstances in a member state allowing deviations from the recommended markets.

The Recommendation also establishes three cumulative criteria that are necessary for any market, either identified by the Commission in the Recommendation or by NRAs on the basis of prevailing market conditions on a specific member-state, to be eligible for ex ante SMP regulation<sup>228</sup>:

- (a) the existence of high and non-transitory barriers to entry of a structural, legal or regulatory nature; these may become less relevant with regard to innovation-driven markets characterised by ongoing technological progress<sup>229</sup>.
- (b) the existence of market structure not tending towards effective competition and
- (c) the insufficiency of competition law alone to address market failures in such market.

These three criteria do not comply entirely with the competition law approach to market definition, because they do not form part of the traditional hypothetical monopolist test and the SSNIP test applied for market definition, which was described in the first section of this chapter. Rather, the first two criteria are taken into account in the calculation of market power of undertakings in a given market, not for the definition of the market itself. The third criterion repeats the Commission's expressed position to abstain from regulation in markets where the application of competition law

---

<sup>227</sup> Par. 19-20 of the Guidelines.

<sup>228</sup> Par. 2 of the Recommendation. The same is repeated in par. 2 of the Draft Recommendation 2013.

<sup>229</sup> Recital 14 of the Draft Recommendation 2013.

may prove capable of remedying the problem identified. This is acknowledged by the Commission, who quotes in recital 11 of the Draft Recommendation 2013:

“The first criterion is the presence of high and non-transitory barriers to entry. However, given the dynamic character and functioning of electronic communications markets, possibilities to overcome barriers to entry within the relevant time horizon should also be taken into consideration when carrying out a prospective analysis to identify the relevant markets for possible *ex ante* regulation. The second criterion addresses whether a market structure tends towards effective competition within a relevant time horizon. The application of this criterion involves examining the state of infrastructure-based and other competition behind the barriers to entry. The third criterion is that the application of competition law alone would not adequately address the market failure(s) concerned. The main indicators to be considered when assessing the first and second criteria are similar to those examined as part of a forward-looking market analysis to determine the presence of significant market power. In particular, indicators of barriers to entry in the absence of regulation (including the extent of sunk costs), market structure, market performance and market dynamics, including indicators such as market shares and trends, market prices and trends, and the extent and coverage of competing networks or infrastructures”.

The Commission’s insistence on the abovementioned criteria in virtually all steps of the SMP process (market analysis, establishment of SMP and imposition of measures on SMP operators) involves the risk that, once their presence is accepted at the phase of market selection, the NRA starts its analysis under the following steps with a ‘prejudiced’ mind<sup>230</sup>. In practice, the issue of the Recommendation in the form of a mandatory list induces less sophisticated NRAs to adopt market definitions without extensive market analysis and more sophisticated NRAs to treat the Recommendation as the minimum level of analysis required in the market<sup>231</sup>. Indeed, most of the

---

<sup>230</sup> Valcke, P., Querk, R., Lievens, E., *EU Communications Law: Significant Market Power in the Mobile Sector*, EE [2005], 23.

<sup>231</sup> Strivens, P., *ibid.* In January 2008, the European Competition Telecommunications Authority (ECTA) published a report on the basis of a benchmark of NRAs across the EU, indicating that the effectiveness of regulation varies significantly and that the actions of more effective regulators had strong influence on the development of broadband. Available at <http://www.ectaportal.com/en/basic651.html>.

notifications concerning market definitions different from the markets defined in the Recommendation that may be in force from time to time come from OFTEL, Ficora, the German, Dutch and other sophisticated NRAs, since the first days of the application of the original recommendation<sup>232</sup>.

In terms of oligopolistic markets, there has never been any market identified on top of the markets of the Recommendation that may have been in force at the time of the relevant notification. Notably, in the period 2003-2007 the only markets where concerns of collective dominance have been identified as credible are the markets for broadcasting (Italy)<sup>233</sup>, broadband access (Malta, albeit withdrawn after the expression of serious doubts by the Commission)<sup>234</sup> and for mobile access and call origination (Ireland, Malta, Spain<sup>235</sup>), which were all provided as eligible for *ex ante* market Regulation under the original 2003 Recommendation. It is noted, further, that Slovenia also notified in 2008 collective SMP in the market for mobile access and call origination, but the designation was removed after the expression of serious doubts by the Commission<sup>236</sup>. Also, none of the total 47 notifications with market assessments involving collective dominance in the period September 2003 – September 2013<sup>237</sup> referred to a market deviating from the list of the Recommendations.

The foregoing remarks possibly show that, as a result of the difficulties involved in addressing competition concerns in oligopolistic markets<sup>238</sup>, unless the market definitions of the Recommendation are capable in themselves in capturing oligopolistic markets, NRAs and particularly less sophisticated NRAs will not be directed to the definitions of markets capable of catching oligopolistic behavior, but only to the

---

232 E.g. refer to cases DE/2012/1358, DE/2012/1359, SE/2005/0188, FR/2005/0205, IE/2005/0158-163, DE/2005/0143 and DE/2005/0233, IE/2005/0137, IE/2005/0138, DK/2005/0141, DE/2004/0119 and DE/2005/0150, AT/2004/0097, UK/2004/0094, FI/2004/0062, UK/2003/0037, UK/2003/0038, IE/2004/0042 and IE/2004/0114, AT/2003/0018, UK/2003/0003, 005-016). Also, Pelkmans and Renda (ibid.) argue that by-passing the three-criteria test on whether *ex ante* regulation was the proper action to take, national markets almost invariably became regulated without appropriate economic analysis.

<sup>233</sup> IT/2004/424.

<sup>234</sup> IE/2003/121, MT/2007/563, ES/2004/330.

<sup>235</sup> MT/2006/443,

<sup>236</sup> SI/2008/806.

<sup>237</sup> 24 involving wholesale mobile access and call origination, 12 involving wholesale international roaming, 4 involving wholesale broadband access, 3 involving wholesale trunk segments of leased lines, 2 involving transit services in the fixed telephone network and 2 involving broadcasting transmission services. The relevant table may be found in the bibliography section.

<sup>238</sup> Refer to the identification of the ‘oligopoly problem’ in chapter 1 and in the description of factors capable of establishing collective dominance in chapter 3.

regulation of single dominance. The analysis of the separate markets identified in the Recommendation that are described in the following sections will make this point.

In fact, as quoted by some scholars, the markets identified in the Recommendation, reflect political decisions on areas susceptible to regulation<sup>239</sup>. This is particularly relevant for the review of regulatory approaches to oligopolistic markets in electronic communications. Indeed, all member states feature a player with SMP in almost all of the seven markets of the 2007 Recommendation<sup>240</sup>. This in itself shows that the Commission's primary policy has been the regulation of single SMP and incumbents, not the promotion of effective competition through regulation in anti-competitive market structures with few players, despite the trend to oligopolistic market structures in electronic communications. Of particular interest is the statement made on pp. 3-34 of the Report commissioned by the European Commission on the revision of the 2007 Recommendation in relation to competition in the mobile access markets:

“In the light of the impracticality of an attempt to apply SMP regulation in oligopolistic markets (and because there is an expectation of increased competition as a consequence of growing use of VoIP), it does not seem worthwhile to spend material effort in defining mobile access markets and considering whether or not the Three Criteria are satisfied. All in all, although the oligopolistic mobile markets are often not truly competitive, there is little that can be done under the Framework”.

### **2.2.2. Markets susceptible to regulation**

In the 2007 Recommendation, the Commission identified one retail market and six wholesale markets susceptible of ex ante regulation. Unlike the 2003 recommendation, which discriminated between residential and non-residential customers at retail level<sup>241</sup>, the Recommendation identified a single retail market susceptible of ex ante

---

<sup>239</sup> Strivens, P., *New Access Conditions – a Challenge to Competitive Telecoms Operators and Service Providers*, [2003] CTLR, 121.

<sup>240</sup> Pelkmans, J., Renda, A., *Single eComms Market? No such thing ...*, Bruges European Economic Policy Briefings [2011] 22, 8.

<sup>241</sup> Market segmentation by reference to the customer base has been applied frequently in the Commission's decisionary practice in telecommunications. Refer, e.g. to Commission Decision of 17.7.1996, Case No. IV/35.617, *Phoenix/Global One* (1996) OJ L239/57, where separate markets were

regulation, access to the public telephone network at a fixed location for residential and non-residential customers.

At wholesale level, the Recommendation identified the following markets:

1. Call origination on the public telephone network provided at a fixed location.
2. Call termination on individual public telephone networks provided at a fixed location.
3. Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.
4. Wholesale broadband access. This market comprises non-physical or virtual network access including ‘bit-stream’ access at a fixed location. This market is situated downstream from the physical access covered by market 3 listed above, in that wholesale broadband access can be constructed using this input combined with other elements.
5. Wholesale terminating segments of leased lines, irrespective of the technology used to provide leased or dedicated capacity.
6. Voice call termination on individual mobile networks.

According to the Draft Recommendation 2013, only the following four (4) wholesale markets are susceptible to *ex ante* regulation:

Market 1: Wholesale call termination on individual public telephone networks provided at a fixed location

Market 2: Wholesale voice call termination on individual mobile networks

---

delineated for products destined for (i) telecommunications traffic carriers and service providers (the market for carrier services), (ii) corporate users (enhanced customised and/or packet-switched data communications services) and (iii) individuals who are away from their normal location (traveller services). Similar distinctions are also found in *Atlas*. In *BT/MCI II*, although it was recognised that there are different categories of customers to which international direct dialled call services are targeted (wholesale and retail customers, with the latter being broken down further into business and residential end-users), the Commission did not express its view as to whether a market segmentation on this basis would be necessary (par. 14 of the Decision). Other examples of market segmentation by reference to the customer base comprise low-cost roaming services for frequent travellers (e.g. Case No. IV/1430, *Vodafone/Airtouch*, Notification of 6.5.1999), dial-up markets for residential and business customers (Case No. COMP/M. 1838, *BT/Esat*, 27.3.2000).

Market 3: a) Wholesale local access provided at a fixed location

b) Wholesale central access provided at a fixed location for massmarket products

Market 4: Wholesale high-quality access provided at a fixed location

According to the Report commissioned by the Commission in the context of the revision of the Recommendation<sup>242</sup>, wholesale local access at a fixed location coincides with Market 4 of the 2007 Recommendation (wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location) and Wholesale central access provided at a fixed location for massmarket products is equivalent to Market 5 of the 2007 Recommendation (wholesale broadband access). Market 4 of the Draft Recommendation 2013 encompasses market 6 of the 2007 Recommendation, as well as other hybrid products that in a forward-looking perspective may offer the same result for high-quality access.

In short, the list of the Draft Recommendation includes two markets pertaining to the termination of voice and three wholesale markets relevant to access to data transmission services. The two categories will be now examined in turn.

#### **2.2.2.1. The access markets to data transmission services at a fixed location**

Access to data transmission services is also considered the most developing part of electronic communications. Under both the 2007 Recommendation and the 2013 Draft Recommendation, the types of service that have been considered to be susceptible of *ex ante* regulation by the Commission in the Recommendation are a) wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location (now Wholesale Local Access), b) wholesale broadband access

---

<sup>242</sup> The Final Market Report for DG Connect, 171.

(now Wholesale Central Access) and c) terminating segments of leased lines (now wholesale high-quality access)<sup>243</sup>.

The first two sub-markets are related to the retail market for broadband services. According to the Commission, wholesale network infrastructure was tantamount to local loop access, which met the three criteria test due to the inherent difficulties in replicating local loop and to the insufficiency of competition law to address competition law issues as a result of the complexities involved in the intervention requirements<sup>244</sup>. The principle of technological neutrality was behind the deletion of the word ‘metallic’ in the definition of the local loop market in the Recommendation as opposed to the definition of the local loop market under the original recommendation<sup>245</sup>, which implied that long-term competitive effects regarding local end-customer access by technologies like WiMax, TV-cable, etc. should be taken into consideration.

The Commission did not consider wholesale broadband access a substitute for local loop access due to network topology issues and associated investment from the part of the operator:

‘From a demand perspective, a retail provider using wholesale broadband access will only consider unbundled local loops a substitute if it has all the other network elements needed to self-provide an equivalent wholesale service. The supply substitution possibilities depend on the same condition. Therefore, unbundled local loops and wholesale broadband access constitute distinct markets’<sup>246</sup>.

The Commission’s justification for the separation of wholesale broadband access from wholesale network infrastructure access was not entirely in line with the principle of

---

<sup>243</sup> In NL/2012/1407-1408, the Dutch NRA identified a single wholesale market for physical network infrastructure access including LLU at a fixed location in the Netherlands, WBA and wholesale terminating segments of leased lines.

<sup>244</sup> Refer to pp. 31f of the Explanatory Note.

<sup>245</sup> Typical technical properties for common bitstream access could be defined by a maximum capacity of up to 16Mbit/s per line and it can be entirely left to the regulated undertaking whether it meets these requirements with a copper or a fibre connection, Kamecke, U., Korber, T., *ibid.*, 333.

<sup>246</sup> Explanatory Note, p. 33.

platform independence, although the same principle was applied for the refinement of the local loop market. In fact, since the first days of the 2007 Recommendation, the Commission took a strict view in relation to the separation of alternative technologies from the delineated markets of the Recommendation, when it dismissed the plans of the German regulator to apply a regulatory holiday on the VDSL market<sup>247</sup>. The Commission supported the argument that the introduction of advanced technologies like VDSL should be included in the definition of the wholesale network infrastructure access, on the grounds that technological neutrality requires an extension of broadband regulation to the new technology<sup>248</sup>. Also, under proper spectrum management, wireless broadband is expected to be subject to significant technological progress, such that 4G wireless technologies (like LTE) can become genuine alternatives to fixed broadband with fairly high speeds<sup>249</sup>. This opportunity is of particular importance for non-cable countries, since platform based competition would thus become possible in broadband more or less like in cable countries<sup>250</sup>.

In the same line of thinking it can be argued that considering other access technologies not equivalent to local loop unbundling is in breach of the principle of applying access obligations on all networks irrespective of the technology used. The fact that the Commission believed that regulated local loop access would be insufficient to constrain potential market power at the retail level, if wholesale broadband access remained unregulated, supports the view that the two submarkets should be considered to form part of a single market. The decision to consider separate markets for broadband access and local loop indicates the intention to impose specific obligations on the former incumbents and owners of local loop. This conclusion is reinforced by the Commission's encouragement on NRAs to judge with a forward-looking approach to facilitate infrastructure-based competition, which indicates, on the one hand, acceptance of obligations imposed on the owners of existing local loop infrastructure

---

<sup>247</sup> [2007] Rapid Press Release IP/07/237.

<sup>248</sup> Refer also to p. 30 of the Recommendation.

<sup>249</sup> However, in the recent case CZ/2012/1322, the Commission adopted its decision of 10.08.12, whereby it rejected the definition of broadband access markets by the Czech NRA, which included WiFi and cable in the relevant broadband access market.

<sup>250</sup> Pelkmans, J., Renda, A., *ibid.*, 10. The authors argue that, to seize the opportunity, it is important to make available scarce spectrum, particularly in view of the freeing of frequencies as a result of the transition from analogue to digital broadcasting and that spectrum regulation at European as opposed to national level is necessary in that respect.



and, on the other hand, prohibition of obligations imposed on the owners and developers of alternative infrastructure<sup>251</sup>.

In its Recommendation on NGA, the Commission advised that the review of markets on wholesale broadband access and wholesale network infrastructure access should be performed in a coordinated and timely manner by NRAs, taking also into account of NGA networks<sup>252</sup>. In its response to the European Commission's questionnaire for the public consultation on the revision of the Recommendation on Relevant Markets<sup>253</sup>, BEREC referred to the serious challenges posed by alternative infrastructure roll-out, in particular in the context of NGA deployments that will lead to different conditions of competition prevailing in different geographic areas. According to BEREC, the competitive scenario may thus develop from the traditional single firm SMP situation towards a duopolistic situation, where only two operators are competing in a given area (*e.g.* fibre networks and upgraded cable networks).

Nonetheless, BEREC did not consider revisiting the boundaries between market 4 and 5 of the 2007 Recommendation<sup>254</sup>; it took the view that the delineation between market 4 (passive products) and market 5 (active products) is still justified with regard to the telecommunication markets of most European countries, on the grounds that a large number of providers still rely on passive products rather than on active products and, in most countries, those active products are not regarded as sufficient substitutes in terms of technological independence, capability to innovate, provision of quality differentiation and coverage.

In the Report commissioned by the Commission in the context of the revision of the Recommendation, the wholesale markets for local loop unbundling and the wholesale broadband access as well as terminating segments of leased lines remain on the list,

---

<sup>251</sup> The Commission accepted, though for a temporary period of time, the application of differentiated treatment of the pricing for call termination by the Italian NRA on Telecom Italia, which was obliged to apply cost-oriented price formation, while allowing alternative providers to charge higher prices for traffic terminated over their networks, see Commission Press Release IP/06/685.

<sup>252</sup> Commission Recommendation of 20 September 2010 on regulated access to Next Generation Networks, [2010] OJ L251/35, par. 5.

<sup>253</sup> BoR(13) 22, at p. 14.

<sup>254</sup> *Ibid.*, at. p. 19.

with modifications<sup>255</sup>. According to the Report, market 4 should be redefined as the market for Wholesale Local Access (WLA) comprising “wholesale (physical) network infrastructure access or functionally similar wholesale local virtual network access” and market 5 is redefined as the market for Wholesale Central Access (WCA) comprising wholesale bitstream access or other forms of central virtual network. The Report also distinguishes separate retail markets for mass-market broadband services and high quality bespoke broadband services – which are typically demanded by residential and non-residential users respectively. The distinction at retail level translates into distinct wholesale markets for WCA with possibly a different set of competition problems.

Since the 2007 Recommendation, the Commission considered the merging of these two markets in the longer term:

‘Depending on the way in which network upgrades occur or the particular demand and supply conditions evolve in Member States, these two wholesale markets may remain distinct or, conceivably merge into one’<sup>256</sup>.

According to the 2013 Draft Recommendation, the markets are defined separately, but under the same umbrella of Market 3, possibly leaving more latitude to NRAs to assess them as a single market.

The merger of the two markets will imply the increase of the number of players in the market and, although the emergence of oligopolies cannot be precluded in the wholesale central access market, its merger with the network access – local loop market will increase the possibility of examining the wholesale access market from an oligopoly perspective<sup>257</sup>. This is supported also by BEREC’s assessment in its response to the European Commission’s questionnaire for the public consultation on the revision of the Recommendation on Relevant Markets<sup>258</sup>, that due to the

---

<sup>255</sup> Ecorys, Final Report commissioned for DG Connect: *Future electronic communications markets subject to ex ante regulation*, Rotterdam, 18.09.2013.

<sup>256</sup> Explanatory Note, p. 35.

<sup>257</sup> Cave et al, *ibid.*, note on p. 17 that, while the ability of rival operators to potentially offer wholesale services may not be strong enough in the short run, it may be strong enough in the long run to take into account in market analysis.

<sup>258</sup> BoR(13) 22, p. 8.

competitive dynamics and costs (mainly economies of scale and scope) associated with fibre deployment, the number of operators that will be able to make their own commercially viable roll-out of NGA infrastructure (including within dense areas) will likely remain limited.

The definition of a single market for the supply of wholesale broadband access is reinforced also by the increasing discussions on the separation of networks and services, because it will increase the number of market participants through the inclusion of self-supply. The Commission has stated in the Explanatory Note that self-supply is not taken into account for market assessment in the absence of a merchant market and potential demand or if alternative operators face capacity constraints, or their networks lack the ubiquity expected by access seekers, and/or if alternative providers have difficulty in entering the merchant market readily<sup>259</sup>. If networks and services are separated, the supply of network access, regardless of whether it is to the operator's retail arm or to a third party, will be taken into account for market assessment purposes.

It is also noted that, as far as end-to-end retail broadband is concerned, economists have argued that joint dominance by operators providing broadband through ADSL and wireless broadband is possible, although the different structures of wired and wireless platforms make tacit collusion less likely. In addition, in the absence of strong competition provided by wireless technologies, the possibility of joint dominance by operators providing broadband through ADSL and those providing the same services over cable cannot be ruled out:

‘Where firms can offer both DSL – based on bitstream and ULL – and cable broadband, they can offer a national service in both cable and non-cabled area. This will enhance the symmetry between operators and may promote tacit collusion. Overall, then, there are good grounds for anticipating market failure problems (up to and including dominance) in non-mobile retail broadband markets, the absence of regulation’<sup>260</sup>.

---

<sup>259</sup> Explanatory Note, 15.

<sup>260</sup> Cave et al., *ibid.*, 75.

The 2013 Report on the revision of the markets of the 2007 Recommendation also suggests revisiting the market for the terminating segments of leased lines to encompass part of Market 5 of the Recommendation. The 2007 Recommendation distinguished the trunk segments of leased lines from their terminating segments, but they provide definitions of neither of the two. According to the explanatory note, what constitutes a terminating segment and, conversely, what part of the network forms part of the trunk network, will depend on the network topology to particular member states and will be decided upon by the relevant NRA<sup>261</sup>.

The Commission justified its choice to identify the terminating segments of leased lines as a market susceptible to *ex ante* regulation on the grounds that such terminating segments rely on one form or another on the former incumbent's ubiquitous access network<sup>262</sup>. The choice of this market also indicates the Commission's intention to have SMP and single dominance established on this sub-market of leased lines<sup>263</sup>. Notably, the Commission has pre-established single dominance on the terminating segments of leased lines. This view is reinforced by the lack of identification of specific market boundaries, which creates the impression that each NRA is free to establish market limits depending on the presence of other competitors in the various parts of the leased lines networks<sup>264</sup>; the part(s) where only the former incumbent is present will probably be defined as terminating segments of leased lines and the former incumbent will be susceptible of regulatory measures<sup>265</sup>. Indeed, until 30.09.2013 there was no notification to the Commission claiming to have assessed prospective collective dominance issues on this market.

---

<sup>261</sup> Explanatory Note, p.38.

<sup>262</sup> *Ibid.*, 38-39.

<sup>263</sup> However, the Commission does not preclude the perspective finding of individual trunk segments of leased lines as susceptible of SMP regulation, see p. 38 of the Explanatory Note.

<sup>264</sup> In the study commissioned by DG Connect in the context of the revision of the Recommendation (supra at 57), it is emphasised (p. 142) that as a general rule, only the incumbent has near-ubiquitous network. Competing network operators will tend to have a significant trunk network and access network in areas where businesses (especially large businesses) are concentrated. Outside the business districts with the highest density of large businesses, it will often be the case that there are only one or two networks within reach of any particular building. In the absence of wholesale access products supplied by the incumbent, relatively few customers would be able to be served by any provider other than the incumbent, despite the existence of considerable amounts of competing fibre relatively close by.

<sup>265</sup> It is interesting to note that, in *Vodafone/Cable and Wireless* (Case COMP/M.6584, 03.07.2012, par. 28f), a single market for wholesale leased lines was defined, although the final determination on a possible segmentation into trunk and terminating segments was left open. In *Telefonica/Hansenet* (Case COMP/M.5730, 29.01.2010, par. 6f), leased lines were included in the wider market for internet access.

This argument is not affected by the 2013 Draft Recommendation, where terminating segments of leased lines are re-defined into high-quality business data connectivity comprising traditional leased line segments, Ethernet services and suitably specified DSL services<sup>266</sup>. According to market study of DG Connect,

“in some cases, where there is a good degree of replication throughout all parts of the trunk network, the market would be identical to the existing Market 6/2007. Other NRAs would find it appropriate to include ‘long, thin’ trunk routes but this would need objective justification. The advantages of this scheme over the current one are that:

1. It provides a generic approach which fits the circumstances of all NRAs better than the ‘trunk/terminating’ segmentation of the current Recommendation; and
2. It provides for different treatment of different parts of the trunk network, where justified by differences in competitive conditions”<sup>267</sup>.

#### **2.2.2.2. Call termination**

The Commission has identified separate markets for the networks’ capacity to make outgoing calls (call origination) and to receive calls (call termination) on an individual network basis. Unlike call origination, which applies to calls on all networks, call termination is defined on an individual network basis.

The termination of a call as a criterion for market segmentation is justified by the Commission in the Guidelines, as follows:

“[i]f a fixed operator wants to terminate calls to the subscribers of a particular network, in principle, it will have no other choice but to call or interconnect with the network to which the called party has subscribed”<sup>268</sup>.

---

<sup>266</sup> The generic characteristics of the market are that the service should provide transparent dedicated capacity with a high specification service wrapper. Segmentation of such a market by bandwidth has been a common past practice and we would expect that this continued to be justified in many cases.

<sup>267</sup> The Final Market Report for DJ Connect, p. 146.

<sup>268</sup> Footnote 69 of the Guidelines.

A couple of years earlier, the Commission had explained in *Telia/Telenor* that,

“in theory, a subscriber facing local loop competition could rent one line only for incoming calls, and a separate line only for outgoing calls, thus allowing him to buy different services from two different providers”<sup>269</sup>.

In practice, though, it would be difficult to unbundle the individual price elements of the service for a final user, as the origination and the termination of a call is usually offered together, as a bundled product. Indeed, the Commission hastened to add in the same paragraph of the same decision that the argument could not be regarded as realistic at least at the time the decision was issued, because the result would be more expensive than having one line for both incoming and outgoing calls (the subscriber would incur two charges for fixed line rentals instead of one).

Other views have supported the definition of different markets for incoming calls on the basis of the call's origin or of a notional market encompassing termination of calls on the same network (on-net terminating calls) and call origination (outgoing calls to all networks), on the grounds that, like call origination, no rate is paid for on-net termination of calls<sup>270</sup>. This means, also, that a separate (notional) market could be defined for the termination of all off-net termination calls, encompassing all networks. In the Guidelines, the Commission has also accepted, in relation to mobile networks that

‘the question whether the access market to mobile infrastructure relates to access to an individual mobile network or to all mobile networks, in general, should be decided on the basis of an analysis of the structure and functioning of the market’<sup>271</sup>.

---

<sup>269</sup> Case IV/M.1459, *Telia/Telenor* [2001] OJ L40/1, par. 87.

<sup>270</sup> Cave et al., *ibid.*, 38, 98.

<sup>271</sup> Par. 69 of the Guidelines.

The Commission established the need for the separation of markets for the origination and for the termination of calls in the existence of alternatives to call origination only, as opposed to the termination of the calls and specifically to

“the treatment of services such as carrier pre-selection and call-by-call selection, which apply only to outgoing calls”<sup>272</sup>.

Although carrier selection and pre-selection services exert some competitive pressure on the call origination services particularly at retail level, it is doubted whether at wholesale level the existence of such competitive pressure is decisive in determining a separate market for the origination and for the termination of the call on the same network on the basis of the hypothetical monopolist test or whether carrier pre-selection and call-by-call selection services could be simply regarded as distinct markets for the provision of value-added services at retail level. The latter scenario has been identified in *Mannesmann/Orange*<sup>273</sup>, although no discussion on carrier pre-selection and call-by-call selection specifically took place. The parties’ submissions were in favour of a segmentation of the mobile market into carrier services and downstream markets (markets for distribution of mobile telephony<sup>274</sup>) but the Commission left the issue open, as its resolution was found not to affect the assessment of the case at issue.

The definition of termination markets on both mobile and fixed networks individually, unavoidably leads to the identification of SMP on each network, since each separate network is considered a separate market for the termination of calls on that network, irrespective of the market share that each operator holds in the overall mobile or fixed market for call termination. With its Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (the Termination Rates Recommendation)<sup>275</sup>, the Commission urged NRAs to impose symmetric price control and cost-accounting obligations in accordance with Article 13

---

<sup>272</sup> *Telia/Telenor*, par. 87.

<sup>273</sup> Case No. Comp/M.1760 *Mannesmann/Orange*, Notification of 17.11.1999.

<sup>274</sup> Although no formal position was reached on the need for any segmentation of the overall mobile telephony market, the Commission does not seem to favour the parties’ view that the sale of handsets is included in the general distribution market for mobile services.

<sup>275</sup> Commission Recommendation 2009/396/EC of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, OJ L124/67.

of Directive 2002/19/EC on the operators designated by NRAs as having significant market power on the markets for wholesale voice call termination on individual fixed and mobile public telephone networks on the basis of costs incurred by an efficient operator and in applying a pure LRIC bottom-up modelling approach.

Obviously, this reflects the Commission's decision to regulate the termination of calls, through the imposition of measures on all operators, as a result of the calling-party-pays (CPP) system, which is followed throughout the EU. In its explanatory memorandum to the Recommendation, the Commission accepts as the sole possibility for the finding of sufficient competition in termination markets the change of the charging system from CPP to a system where the receiving party pays for the termination of the service<sup>276</sup>, like the Bill and Keep (BaK) wholesale charging system.

Under the BaK, which is followed in jurisdictions like the US and Singapore, wholesale tariffs for termination are set to zero, so operators cover the net cost of providing termination from their own retail users. In this way cost recovery is moved from a regulated market (termination) to a retail service that is generally offered in a competitive market<sup>277</sup>. Indeed, although termination charges have dropped as a result of regulation<sup>278</sup>, BEREC considers BaK more promising as a regulatory reaction against excessive rates for voice termination in the long run. Moving cost recovery to retail markets increases incentives for cost minimisation as more cost are subjected to competitive cost recovery. Cost recovery from retail users does not mean that the prices for those users will have to increase on average. In parallel to the eliminated wholesale revenue for termination there is overall the same amount of eliminated wholesale costs albeit effects on individual operators may differ, whereas in the retail market operators have several options to recover the cost of termination and to distribute the benefits of the eliminated costs<sup>279</sup>.

---

<sup>276</sup> Explanatory Note, *ibid.*, 9.

<sup>277</sup> BEREC Common Statement on Next Generation Networks Future Charging Mechanisms/ Long Term Termination Issues, BoR(10) 24 Rev 1, 24.

<sup>278</sup> BEREC Common Statement on NGN etc., 51.

<sup>279</sup> *Ibid.*, 25.



Under the CPP, the Commission has pre-established single dominance on the markets for call termination on both mobile and fixed networks through the definition of a separate market for the termination of calls on individual networks. In other words, the establishment of such narrow market and the unavoidable designation of single SMP on each network, whether fixed or mobile, forms the vehicle for regulation by the Commission of termination rates. Indeed, the review of notifications made under Article 7 of the Framework Directive demonstrates that the Commission has strictly requested the designation of single SMP on all networks, without exception and adherence to the provisions of the Termination Rates Recommendation. For example, under LV/2012/1356, the Lithuanian NRA re-notified to the Commission the market for mobile termination after the opening of a Phase II investigation caused by the original refusal of the NRA to notify 12 MVNOs as SMP and to impose access obligations on the smallest MNO. In DE/2013/1460 the Commission expressed serious doubts on the decision of BNetzA to designate only 2 out of the 57 operators providing termination over their respective networks and on the application of a LRAIC+ instead of a BU-LRIC methodology (which, among other things, increased the FTR/MTR difference). Under DE/2013/1424, BNetzA proposed to impose price caps for mobile termination rates based on a BU-LRIC plus methodology on all German MNOs until 30.11.2014, which resulted in the Commission issuing a Recommendation to BNetzA setting out clearly the following:

‘The Termination Rates Recommendation sets out a consistent approach that the NRAs should in principle follow regarding price control obligations for fixed and mobile termination rates, i.e. a pure BU-LRIC methodology with a narrow definition of the incremental cost. If NRAs don’t follow such methodology they should provide reasons for doing so’<sup>280</sup>.

---

<sup>280</sup> Also, in CZ/2012/1392-1393, the Commission opened a Phase II Investigation on termination charges on fixed and mobile markets, as a result of asymmetric regulation imposed by the NRA on larger and smaller operators, whereas under CZ/2012/1327 the Commission commented against the exception of the 4<sup>th</sup> smallest MNO from regulation, because even if its termination rates had followed the three larger operators' regulated prices and there were no asymmetries between operators at the time of notification, an asymmetry of termination rates would still arise with the implementation of the proposed new rates, or with the application of the BU-LRIC model that was under preparation. In FR/2012/1304 the Commission expressed serious doubts for the setting of asymmetric mobile termination rates in favour of new MNO and MVNOs, because it considered that full MVNOs and their respective host MNOs provide the same termination service since both operators made use of the same mobile network on the basis of the wholesale service for national roaming. Similar reasoning may be found in GI/2012/1334-1345, SK/2012/1324-1325, ES/2012/1314, BG/2012/1317 et al.

However, one can reasonably wonder if the identification of such narrow market as network termination may be a possible failure of the hypothetical monopolist and the SSNIP tests in oligopolistic environments, i.e. of the failure to capture the oligopolistic nature and interactions of many markets, as set out in the first section of this chapter, thus leading the designation of dominant operators as monopolists rather than oligopolists. In other words, the question raised is the following: Could the raising of termination rates by one operator be found to have profitably increased the termination rate by a hypothetical SSNIP and would such price increase lead also competitors to respond by raising price? Such exercise, which could lead to the identification of an oligopolistic -instead of monopolistic- market does not appear to have been performed in Commission documents.

Of course, full market analysis would be required to support the foregoing assumption. However, it is remarked that, if the Commission had allowed the definition of wider markets for the origination and termination of calls, encompassing multiple networks and possibly multiple platforms, there would be room to assess the existence of SMP jointly with other operators<sup>281</sup>. Economists have supported the view that there is an increased risk of joint dominance problems that may be created by mobile operators as opposed to network operators using other platforms due to the existence of calls to mobile from other platforms<sup>282</sup>. In two-way access situations, namely in cases where two operators are needed to complete a call, the termination price is negotiated between the two networks. Although the countervailing buyer power may become important<sup>283</sup>, it is possible that the interconnect partners may be better off by setting a higher termination rate<sup>284</sup>, which is typical collusive behaviour under oligopolistic markets.

Joint dominance issues could be assessed also if a narrower separate market were defined for the termination of all off-net calls with a possible further segmentation by

---

<sup>281</sup> The definition of a single market for the origination and termination of calls may also apply if BEREC's opinion is followed and BaK replaces CPP. Of course, if the expectations of BEREC materialise, the market will probably be considered competitive and regulation will not be necessary.

<sup>282</sup> Cave *et al.*, *ibid.*, 89-90.

<sup>283</sup> The countervailing power of customers is a factor affecting the finding of joint dominance, as explained in chapter 3.

<sup>284</sup> Cave *et al.*, *ibid.*, 56 -57.

reference to the platform where the call is terminated (mobile, fixed etc.). This approach would not prevent the NRAs, following market analysis, to impose on operators measures regarding termination services on individual networks, which would form part of the wider market for call termination or of an even wider market encompassing call origination and termination on fixed or mobile networks, i.e. one wholesale access market, should they consider that market conditions so warrant.

The increasing trend for double, triple or quadruple offerings by operators which include fixed and/or mobile calls, broadband services, and, possibly, TV services, all bundled together, demonstrates the intention of operators to establish a market where the same network will be used for multiple product offerings<sup>285</sup>. In such environment, one wholesale market for access to all parts of the network may prove to reflect the scope of competition law inquiries more accurately. According to the BEREC Report on impact of bundled offers in retail and wholesale market definition<sup>286</sup>, the identification of a bundled market for multiple offerings at retail level may also indicate the existence of a bundled market at wholesale level allowing for the provision of the same services at retail<sup>287, 288</sup>.

---

<sup>285</sup> Since 2006, the Commission has recognised in Case No. COMP/M.4063, *Cisco/Scientific Atlanta*, par. 19, the rapidly emerging character of triple play offerings.

<sup>286</sup> BoR (10) 64, 17f.

<sup>287</sup> Bundling practices are not necessarily anti-competitive. Modern economic analysis has demonstrated that tying often yields pro-competitive effects, as it can increase convenience and lower transaction costs under specific circumstances. The value of an unbundling policy depends on the state of competition in downstream markets that require intermediate productive inputs from the upstream market, because if an unbundling policy cannot increase economic efficiency in a downstream market, then there is no need and no justification for intervening in the economic decisions of players in upstream markets. Evans, D., Padilla, J., Polo, M., *Tying in Platform Software: Reasons for a Rule-of-Reason Standard in European Competition Law*, [2002] 4 World Competition, 510-511.

<sup>288</sup> European case law on tying has endorsed a five-step test in assessing relevant cases consisting in the existence of the following elements: (i) Dominance of the supplier, (ii) Two products (one tied and one tying) that are separate of each other with distinct demand; (iii) Coercion; (iv) Restrictive effect on competition for the “tied” product. Markets characterised by network effects, such as telecoms, may be particularly vulnerable to tying, because in such markets the number of customers who acquire the product influences future demand; (v) Absence of objective and proportionate justification for the coercion. Case COMP/C-3/37.792, *EC Commission v. Microsoft*, decision of 24 March 2004. The decision was upheld by the GC on September 17, 2007, OJ L 32/23. Howarth, D., McMahon, K., *ibid.*, 127. Dolmans, M., Graf, Th., *Analysis of Tying under Article 82 EC: the European Commission’s Microsoft Decision in Perspective*, [2004] 2 World Competition, 226-237. The scholars have criticised such approach for creating the risk that coercion will become a redundant proxy for market power and that the “single monopoly theory” developed by the Chicago School, as ignoring strategic considerations that may guide the dominant firm to tying other than extracting financial profits from the sale of the bundled products as a whole. According to this theory, tying a dominant product with a competitively supplied product will not allow the dominant company to extract two monopoly profits from a tie,

If wider market definitions were adopted, collusive practices may have been found to exist as regards the setting of termination rates, as a result of high market concentration in network markets and transparency of rates resulting from access agreements<sup>289</sup>. Commission documents do not explain why none of the foregoing options for wider market definitions was adopted. However, it is plausible to assume that, through the establishment of artificial narrow termination markets, the Commission did not risk the establishment of SMP, as would have been the case if NRAs were invited to assess oligopolistic markets. In other words, the Commission's resolution to adopt such narrow termination markets, did not leave room to NRAs to establish market conditions capable of negating eventual findings of collective SMP in oligopolistic markets.

#### **2.2.2.3. The Mobile Markets**

The majority of notifications made by NRAs to the Commission under Article 7 of the Framework Directive associated with issues of collective dominance involved the market for mobile access and call origination (Market 15 of the 2003 Recommendation). Access and call origination to mobile networks was removed from the list of the 2007 Recommendation despite the oligopolistic structure of the market, which is due to spectrum limitations that have not been eliminated, albeit the Commission recognised that in Member States with small number of licenses and no prospect of entry in the medium term, there may exist incentives and possibilities for mobile operators to tacitly collude<sup>290</sup>. This reflected the view of economists, who had associated the direction of the mobile industry towards effective competition with the removal of non-structural barriers<sup>291</sup>.

---

because an attempt at raising the price of the tied product will serve to increase the price of the bundle as a whole.

<sup>289</sup> Refer to chapter 3 for a discussion on market conditions capable of creating tacit collusion.

<sup>290</sup> Explanatory Note, 45.

<sup>291</sup> Cave *et al*, *ibid.*, 99.

In the same line of thinking, the Explanatory Note explained that in most Member States effective competition in mobile networks resulted from the lack of switching costs between operators and the degree of competitiveness in the market has been correlated with the presence of Mobile Virtual Network Operators (MVNOs), who provide mobile services over networks owned and operated by others<sup>292</sup>. Notably, the sale of excess capacity to MVNOs resulted to more efficient use of the network. In addition, the revised Directives<sup>293</sup> of the 2009 reform package allowed the assignment of spectrum rights by operators, which may influence (increase) the number of players in the market<sup>294</sup>. However, the method applied for the original award of spectrum is also crucial to the decision of the operator on the assignment of the unused part: an operator who has paid a high bid to get spectrum through an auction process is more likely to be willing to trade unused spectrum rights in order to get a (quicker) refund on the initial investment than an operator who won a beauty contest on the basis of commitments made for the final use of the awarded spectrum rights<sup>295</sup>.

Further, in an oligopolistic context, collusion may take place at wholesale level either preventing MVNO entry or refusing assignment of unused spectrum. In fact, the Commission has considered issues of oligopolistic structure in the mobile market, in terms of collusion at wholesale level preventing MVNO entry. It took the view, though, that, if there is competitiveness at retail, collusion at wholesale level to prevent MVNO entry cannot be sustained<sup>296</sup>. Nonetheless, albeit MVNOs are now common in many national markets, market studies argue that they have not made a significant contribution to increased competition everywhere; in some Member States they have little or no market share and in others, the terms on which they have been able to gain access do not allow for significant undercutting of the prices charged by the host

---

<sup>292</sup> Explanatory Note, 45.

<sup>293</sup> Articles 9 and 9b of the revised Framework Directive and Articles 5f of the revised Authorisation Directive.

<sup>294</sup> In the Explanatory memorandum to the Commission Proposal amending the Framework, Access and Authorisation Directives, the Commission pointed out that technological development and convergence underline the importance of spectrum, and that a more flexible approach is thus needed to exploit the economic potential and realise the societal and environmental benefits of improved spectrum usage. Refer also to Pelkmans, J., Renda, A., *ibid.*, who claim that for efficient measures to be taken towards proper spectrum management, the European Commission should mandate spectrum management, not the member states separately, as is the case today.

<sup>295</sup> Binmore, K., Klemperer, P., *The Biggest Auction ever: the sale of the British 3G Telecom Licenses*, [2002] *The Economic Journal*, 112: 75f.

<sup>296</sup> Explanatory Note, 45.

network operator<sup>297</sup>. BEUC reported that in the Czech Republic, the network operators were all sister companies of foreign MNOs who all charged significantly less in their home markets. There is good reason to believe that prices are not yet close to the competitive level throughout Europe, despite the difficulty in establishing SMP, either at retail or wholesale level.

Overall, the study commissioned for DG Connect in the context of the assessment of markets as susceptible to *ex ante* regulation recognised that, although the oligopolistic mobile markets are often not truly competitive, but took the view that there is little that can be done under the Framework<sup>298</sup>. According to the same study, benchmarking studies indicate significant retail price variations across Europe (which may not be mainly attributable to cost variation)<sup>299</sup>, market developments may alleviate any such concerns over time (e.g. OTT communication) and, if not, the area is a candidate to be reviewed during any future review of the Framework.

The foregoing reflects the Commission's decision to leave mobile services unregulated *ex ante*, with the exception of call termination<sup>300</sup> and international roaming<sup>301</sup>. Notably it indicates the political choice to apply general competition law principles for the regulation of mobile services, save as for the termination of calls, as for any other platform.

#### **2.2.2.4 Other voice markets**

No other voice market has been included in the list of the Draft Revised Recommendation.

---

<sup>297</sup> P. 161.

<sup>298</sup> P. 34.

<sup>299</sup> P. 164.

<sup>300</sup> With respect to call termination, the Commission had no choice but to include mobile networks in the *ex ante* regulation of call termination, since the opposite would imply asymmetric treatment of mobile to fixed and fixed to mobile calls (refer to Cave *et al.*, *ibid.*, 95).

<sup>301</sup> The regulation of wholesale international roaming is discussed in detail in Chapter 4.

The original recommendation of 2003 identified the retail markets for local and national and for international telephone services, subdivided into markets for residential and business customers as susceptible of *ex ante* regulation. These markets were excluded from the list of the 2007 Recommendation, because wholesale regulation, including carrier selection and pre-selection services and wholesale line rental, in combination with Voice over Broadband, implied that the markets tend towards a competitive outcome<sup>302</sup>.

The 2007 Recommendation included the retail market for access to the public telephone network at a fixed location, on the grounds that, like call termination and origination, it is the least replicable element of the wholesale input required to provide retail services<sup>303</sup>. This market has been also removed from the list of the 2013 Draft Recommendation, as a result of the development of multi-play offerings through broadband network access, which evolves into an alternative to fixed access in the short term<sup>304</sup> and the convergence towards a multi-service (including voice) NGN IP-network, where a separate fixed voice market may not be sustainable or efficient in the long run<sup>305</sup>. Albeit the study commissioned in the context of the review of the Recommendation pointed towards the increased substitutability of fixed calls with VoIP and mobile calls<sup>306</sup>, it also emphasized that with the exception of the Netherlands, the UK and Finland, NRAs consider that the market for retail access to the public telephone network is not entirely or effectively competitive and is susceptible to ex-ante regulation<sup>307</sup>.

---

<sup>302</sup> Explanatory Note, 28.

<sup>303</sup> Explanatory Note, 26.

<sup>304</sup> Broadband networks allow customers to access multiple services over a single connection and terminal device, including VOIP and internet access. Even though in most member states the demand for multi-play offerings is at a very early stage, it is expected that it will gain momentum in the medium term throughout the EU (refer to Cave. M., Stumpf, U., Valetti, T., *ibid*, 35). In cases NL/2008/0821-0822, the Dutch NRA included fixed telephony access and voice calls services in the market for retail fixed access.

<sup>305</sup> BEREC Common Statement on Next Generation Networks Future Charging Mechanisms/ Long Term Termination Issues, BoR(10) 24 Rev 1, 1.

<sup>306</sup> *Supra* at 79, p. 77.

<sup>307</sup> *Ibid.*, 78. Both the Netherlands and the UK consider large sub-segments of this market to be competitive and therefore only impose limited retail (cf. Netherlands) or wholesale (cf. UK) remedies on the non-competitive segments (respectively the single calls market and the ISDN2 and ISDN30 access markets). In Finland the market was deemed competitive because the NRA successfully convinced the Commission and the Court to include public mobile access in Market 1/2007. Overall, one may conclude that Market 1/2007 is not deemed effectively competitive by the NRAs across the EU.

The debate around the substitutability of various types of calls and the prospective definition of a market for integrated and convergent fixed and mobile and/or VoIP/VoB services has been ongoing since several years. In *Vodafone – Tele2*<sup>308</sup>, the Commission dismissed arguments in favour of the existence of a market for convergent fixed and mobile services solely by reference to earlier case-law. One year later, in *DT – OTE*<sup>309</sup>, the Commission accepted that cable operators or fixed telephony services provided by mobile operators may exercise competitive constraint on providers of retail fixed telephony services over the public telephone network, but the exact market definition was left open because it did not influence the case at issue.

Since 2010, BEREC has highlighted in its Report on impact of bundled offers in retail and wholesale market definition<sup>310</sup>, that bundles can be efficiency enhancing, and their ability to disrupt competition cannot be judged in absolute terms, but should be considered on a case-by-case basis. In addition, BEREC's report highlighted the difficulties associated with defining a retail market characterised by bundled offers, such as the risk of overestimating demand substitution as a result of potential anticompetitive behaviour (*e.g.* dominant firms reducing bundle prices below an efficient cost level, thus artificially incentivizing substitutability and damaging competition in the longer run). In 2012, BEREC released its Report on the impact of fixed mobile substitution (FMS) in market definition<sup>311</sup> where it pointed out that FMS is likely to become a more relevant consideration in market definition for electronic communications services going forward, since in some member-states (like Finland) there is clear FMS.

In its response to the European Commission's questionnaire for the public consultation on the revision of the Recommendation on Relevant Markets, BEREC highlighted<sup>312</sup> that bundling of broadband retail services has become, in a number of Member States, the standard form of electronic communications services. According to the latest Eurobarometer, in 2011, more than 60% of the households in the EU purchased

---

<sup>308</sup> Case COMP/M.4947, *Vodafone – Tele2 Italy – Tele2 Spain*, 27.11.2007, par. 51.

<sup>309</sup> Case No. COMP 5148, *Deutsche Telekom/OTE*, 2.10.2008, par. 16.

<sup>310</sup> BoR (10) 64.

<sup>311</sup> BoR (12) 52.

<sup>312</sup> BoR(13) 22, p. 9.



broadband services as part of a bundle, while this percentage was 48% for fixed telephony. Broadcasting and mobile services are also offered via bundles, although in lower proportions. BEREC considers that, prospectively, consumer preferences may reinforce the trend already shown by these data, increasing the penetration of bundles and, at the same time, adding new services to the packages. Indeed, this is already the pattern identified in some Member States, where aggressive quadruple play offers exist (including mobile and audiovisual content).

The impact of the foregoing trend on the potential assessment of oligopolistic markets in the future remains to be seen. It is noted, though, that concerns may arise out of the offer of the same bundles of services by operators of a similar size and financial strength (e.g. network operators and broadcasters or IT multinationals), particularly when the requirement to provide such bundled offers also drives alliances across the fixed and mobile segments of the market, as operators are under pressure to become quad-play providers<sup>313</sup>.

## **2.3. Geographic delineation of electronic communication markets**

Unlike product market definition, the 2002 regulatory framework requires from NRAs complete analysis of the geographic dimension of the identified product markets.

### **2.3.1 Criteria for geographic delineation**

The economics of competition law require the geographic market in all industry sectors to comprise an area where

“the conditions of competition are similar or sufficiently homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different”<sup>314</sup>.

---

<sup>313</sup> European Commission, Staff Working Document - Implementation of the EU regulatory framework for electronic communications – 2014, at p. 9.

<sup>314</sup> Par. 56 of the Guidelines.

As described in paragraph 59 of the Guidelines, geographical markets in electronic communications have been traditionally defined by reference to two main criteria: a) the area covered by the network and b) the scope of application of legal and other regulatory instruments. As set out in par. 2.4 of the Commission's explanatory note to the 2007 Recommendation,

‘this corresponds generally to the territory of the member state concerned, since the consideration centres on the scope of the potential SMP operator's network and whether that potential SMP operator acts uniformly across its network area or whether it faces such different conditions of competition that its activity is constrained in some areas but not in others’.

Some commentators have taken the view that, instead of describing the geographical market of the service in question, it is better to add a geographical dimension to the product market. According to this view, the traditional delineation of markets on the basis of the geographical area in which they operate contributes to an undue narrowing of the market,

“which creates a risk that competition law concerns would be voiced whereas on a proper view of the relevant market they would not arise”<sup>315</sup>.

With the exception of regulation, which may limit *de facto* the operation of undertakings in a specific area, the definition of a geographical market with sufficient homogeneity from a competition law perspective is a lot more complex than the delineation of the area of their operation. Elements such as the network coverage or customer preferences as to the area over which the services need to be provided are undoubtedly essential for the proper delineation of the geographical market of a service. Sub-national markets exist where competing infrastructures exist in some areas of the country, particularly urban areas<sup>316</sup>.

However, the geographic definition of the market should not automatically tantamount to the area of presence of all operators, given that regional operators may exert competitive pressure on the national operator and vice-versa. That would be the case

---

<sup>315</sup> Larouche, *ibid.*, p. 164.

<sup>316</sup> Schillemans, K., *Markets for Internet Network Access Defined, The Dutch Approach: A Negative Precedent for ISPs seeking Access to Broadband Intern Networks?* [2003] CTLR, 82f.

for example of wireless operators providing fixed voice services in major cities only or regional broadcasters. National operators face competitive pressure in the regions where local providers operate, but this pressure affects the rates throughout the country, because national operators are obliged to apply the same rates, regardless of the geographical location of the customer<sup>317</sup>.

This last observation is valid particularly for services that are not included in universal service, as defined under the USO Directive and the separate NRAs, like high speed technology broadband access<sup>318</sup>. Albeit not addressed in the Guidelines, it is also particularly relevant for the establishment of oligopolistic markets, given that a national market may be established for the provision of the services at issue, encompassing national and regional operators<sup>319</sup>. Whether SMP may exist in such (oligopolistic) market, this should be the object of a different exercise.

Reference should be also made to the route-by-route approach, which constitutes one specific feature of the geographical dimension of market definition in voice markets. It is based on the premise that the delivery of a service to one country or one city is not a substitute for the delivery of the same to another country or another city. In BT/MCI II<sup>320</sup>, the Commission had identified two distinct geographic markets within any international route each comprised of the originating bilateral traffic from the countries concerned.

The route-by-route approach stems from Commission precedents in network-based sectors and specifically the airline flights, where the origin and the destination of the

---

<sup>317</sup> *Ibid.*

<sup>318</sup> In case of services covered by universal service obligations, the final price may have been set at artificially lower rates, subsidised through public funds or sharing mechanism among providers of e-communications (refer to Articles 12 and 13 of the USO Directive).

<sup>319</sup> The study commissioned for DG Connect recognises (p. 114) in terms of WCA the disciplining effect of other infrastructure-based competition, if it does not belong to the relevant wholesale market, should be taken into account during SMP analysis. This means that, even though the copper incumbent's market share may be high at the relevant wholesale market level, there may be significant indirect competitive constraint from competition at the retail level.

<sup>320</sup> Commission Decision of 14.5.1997, Case No. IV/M.856 *British Telecom/MCI (II)*, [1997] OJ L 336/1, par. 19.

flight condition the demand in such flights. As the ECJ held in *Ahmeed Saeed*<sup>321</sup>, in principle

“and, in particular as far as intra-Community routes are concerned, the economic strength of an airline on a route served by scheduled flights may depend on the competitive position of other carriers operating on the same route or on a route capable of serving as a substitute”.

A similar wording was used by the Commission in BT/MCI II:

“From the consumers’ point of view, the relevant geographic market for international voice telephony services has to be defined with reference to call traffic routes between any country pair, since different international routes cannot be considered as viable demand substitutes. From the supply side, according to most of the operators contacted by the Commission, the possibility of hubbing, i.e. re-routing US-UK traffic through third countries, does not appear to be a viable commercial possibility at present, since under the existing system of accounting rates and proportionate return, it would be more expensive than using direct routes”<sup>322</sup>.

This approach is favoured by the Commission in the Guidelines<sup>323</sup>, albeit characterised as “exceptional”. However, as a result of the technological developments causing the ‘death of distance’ due to re-routing or transit practices via third countries, the Commission has taken a stance towards the route-by-route approach, which is said to depend on the specificities of the market and is recommended to be decided on a case-by-case basis. The route-by-route approach is followed in the context of market definition for leased lines<sup>324</sup>, thus narrowing further the relevant market definition.

---

<sup>321</sup> Judgement of 11.4.1989, Case C 66/86, *Ahmeed Saeed Flugreisen v. Zentrale zur Bekämpfung unlauteren Wettbewerbs* [1989] ECR 803, par. 40. Since then, such approach should be regarded as established case-law in the air transport sector. Indicatively, refer to Case IV/M.157, *Air France/Sabena* [1992] OJ C272/5, Decision of 16.1.1996, *Lufthansa/SAS* [1996] OJ L 54/28.

<sup>322</sup> Par. 19 of the judgment.

<sup>323</sup> Paragraph 61 of the Guidelines.

<sup>324</sup> According to the study commissioned for DG Connect on the re-evaluation of market definitions (p. 146), routes between major cities would normally fall outside the definition (of areas of low replication) but many low-intensity regional routes could fall within it. Excessive atomisation of the trunk market needs to be avoided since the resource requirements for analysing competitive conditions on every route between pairs of nodes on the trunk network are likely to be near-impossible to service.

### 2.3.2. Markets escaping national borders

Under the current framework, following advice by BEREC, the Commission may adopt a decision identifying transnational markets that are not sufficiently competitive and merit the application of *ex ante* regulatory measures<sup>325</sup>. Such decision has been neither passed nor is pending to date. Given the limited number of undertakings that operate trans-nationally, such inactivity is the least worth noting. Indeed, it would be very interesting to review such decision for the purposes of this thesis, since it is likely that pan-European markets may exhibit more oligopoly than monopoly characteristics.

Moreover, the number of alliances and mergers between operators throughout the EU particularly in the course of the previous decade indicated a trend towards consolidation in the sector, including a number of fixed-mobile transactions, in order to respond to higher levels of competition, decreasing revenues from traditional sources and to the increasing need to invest in data capacity<sup>326</sup>. Most of the major European operators followed the strategy of acquiring presence in several member-states through various corporate structures, with the purpose of expanding their presence in various member states<sup>327</sup>. The history of mergers described in chapter 4 behind excessive roaming rates makes this point<sup>328</sup>.

Although the review of prevailing cross-border market conditions throughout the EU escapes the scope and the potential of this thesis, if some speculation is made in this direction, it is expected that in the course of the review for the identification of European-wide markets as susceptible to *ex ante* regulation, the Commission examines the structure of existing European networks, whether applied for voice, Internet or

---

<sup>325</sup> Article 15 par. 4 and article 16 par. 5 of the Framework Directive.

<sup>326</sup> European Commission, Staff Working Document - Implementation of the EU regulatory framework for electronic communications in 2012 and 2013, at p. 9.

<sup>327</sup> This strategy is endorsed by the Commission, refer to section 1.2 of the Proposal for a Regulation amending the Framework Directive etc.

<sup>328</sup> The failure of SMP regulation on wholesale international roaming is discussed in detail in chapter 4 and is also attributed to the geographical dimension of roaming which escapes national borders.

other applications, to identify potential ‘top-level’ or key networks for the connectivity of trans-national network markets.

In *WorldCom/MCI*<sup>329</sup>, the Commission had found that different global markets exist within the Internet depending on the level of the Internet structure on which each party operates (or the level of supply network). Through a detailed analysis of the history of the Internet, the technical characteristics of the services and their mode of transmission, as well as of the structure of the market, the Commission reached the finding that there were three levels of supply network, host to point of presence, ‘ordinary’ Internet service providers (ISPs) and ‘backbone providers’ or ISPs providing top level connectivity. This delineation was established on the premise that the conditions of competition at the various levels are different. The Commission implied that there was sufficient competition at the level of local ISPs, but the finding was different for the upstream markets. By applying the hypothetical monopolist test, the Commission established that top-level network operators are acting independently from the remaining ISPs, as one unit, as a small but significant price increase in Internet connectivity services would be ultimately passed on to the customer. The market at this upper level was regarded as oligopolistic.

The Commission also envisaged the possibility of a future further narrowing of the market for smaller ISPs. It is quoted in paragraph 73 of the decision:

“If the smaller ISPs who currently peer only at the NAPs (National Access Points) were refused settlement-free private peering by the largest networks, they would no longer be capable of acting as top-level networks, and would drop out of the market definition. Because this process is in its early stages, the market definition adopted here will not be narrowed to anticipate such future developments, but the fact that this is likely to happen should be borne in mind as a relevant factor when considering the market power of the parties”.

---

<sup>329</sup> Commission Decision of 8.7.1998, Case IV/M.1069, *WorldCom/MCI* (1999) OJ L116/1.

In the 2007 Recommendation, the Commission did not consider access to the Internet susceptible to *ex ante* regulation:

‘Entry barriers to [the Internet connectivity] market are low and although there is evidence of economies of scale and that the ability to strike mutual traffic exchange (peering) agreements is helped by scale, this alone cannot be construed as inhibiting competition. Therefore, unlike the case for call termination [...], there is no a priori presumption that ex ante market analysis is required’<sup>330</sup>.

However, as a result of the transnational effect of Internet backbone, the foregoing considerations could have been assessed in the frame of an assessment of prospective transnational markets, irrespective of the specific platform used. In view of increased market concentration that are likely to appear at the backbone- or top-level mainly due to the extensive investment required to set up such networks, such assessment would in all likelihood address competition in oligopolistic markets.

## **2.4. Conclusions**

Proper market delineation is a condition precedent for the success of SMP regulation, because it establishes the frame which will catch undertakings susceptible to regulatory measures. The Commission has opted in favour of the pre-definition of markets susceptible to *ex ante* regulation and the markets identified in the Recommendation, reflect political decisions on areas susceptible to regulation. The impression created is that the Commission placed particular weight to the convergence of regulatory approaches, given also eventual differences in the degree of sophistication of the NRAs of the separate member-states.

The Commission has defined narrow product markets and through such narrow pre-definition, it limits considerably the assessment of prospective collective dominance issues. These policy decisions place the regulation of oligopolistic markets at the lower end of regulatory priorities, as opposed to regulation of market power exercised by monopolists, possibly in view of the complexities involved in the assessment of

---

<sup>330</sup> Explanatory Note, 37.

oligopolistic markets. It is noted that in the first ten years of application of the SMP framework, none of the notifications on markets different from the list of the Recommendation involved a market with oligopolistic characteristic or concerns of collective dominance.

Through the definition of a separate market for the termination of calls on individual networks, the Commission has pre-established single dominance on the markets for call termination on both mobile and fixed networks. It may have been the case, that the narrow market definition of the termination markets is the result of cellophane fallacy effects, notably of the failure to capture the oligopolistic nature (and interactions) of the relevant market, hence defining network operators as monopolists rather than oligopolists. One possible explanation may be that the Commission, in recognising the complexities involved in the assessment of factors capable of establishing collective dominance, did not want to leave lea-way to NRAs to refuse the regulation of termination charges unregulated.

The delineation of a separate market for terminating segments of leased lines also points to the designation of the former incumbent as monopolist in the relevant market. The two markets defined for broadband access are the only markets where, theoretically, joint dominance could be established between operators providing broadband through different platforms, particularly as the Commission does not preclude the merging of the two markets into one.

The Commission has excluded mobile services, which is the classic example of oligopolistic structure in telecoms, from the list of regulated markets, with the exception of call termination which applies on calls made on both fixed and mobile platforms, despite indications that the market may not be sufficiently competitive in some member-states.

To allow regulation of future oligopolistic markets, the Commission should revise market delineation under wider market definitions, in order to allow the assessment of prospective joint SMP held by operators present in the market. In that respect, the Commission should consider the definition of wider markets for the origination and



termination of calls, encompassing multiple networks and possibly multiple platforms. Alternatively, the Commission may opt for the definition of a market for the termination of all off-net calls with a possible further segmentation by reference to the platform where the call is terminated (mobile, fixed etc.).

The trend towards the supply of bundled products through the operators with a pan-European footprint on several member-states may also have to be taken into account in future market (pre-)definitions.

Finally, the lack of definition of any transnational market provides further demonstration of the fact that, through SMP regulation, the Commission's focus is still on incumbents' operation at national level. For the purposes of the review of oligopoly regulation in the telecommunications sector, such decision would be of particular interest, given the limited number of undertakings that operate trans-nationally. It is expected that, in this process and in view of the increasingly global character of network markets, the Commission examines the structure of existing European networks, whether applied for voice, Internet or other applications, to identify potential 'top-level' or key networks for the connectivity of trans-national network markets.

# Chapter 3: Assessing Market Power in Oligopolistic Electronic Communications Markets

---

Article 14 par. 2 of the Framework Directive provides that, when assessing whether two or more undertakings are in a joint dominant position in a market, NRAs shall act in accordance with Community law and take into the utmost account the guidelines on market analysis and the criteria of Annex II. These criteria stem from competition law precedents and may be divided into the following categories:

- a) Indications of ineffective competition;
- b) Market concentration
- c) Transparency and retaliation
- d) Potential pressure put by third parties.

As indicated in Annex II, the list is neither cumulative nor exhaustive, but it is intended to illustrate only the type of evidence that could be used to support assertions concerning the existence of joint dominance. The separate categories are examined in turn in each of the sections of this chapter, both from the point of view of their theoretical background as well as their practical application in NRA notifications to the Commission.

The analysis will show that joint dominance is considered a very rare occasion in markets involving highly symmetrical duopolies. This is attributed to the unavoidable generality of the criteria, some of which are capable of being interpreted as capable of having pro or contra collusive effects and to the high evidentiary burden placed on regulators.

### 3.1. Effective competition and significant market power

#### 3.1.1. Defining effective competition in theory

Annex II of the Framework Directive allows intervention for the regulation of joint dominance if the undertakings operate in a market which is characterized by lack of efficient competition. This is in line with the general approach to Article 102 cases, as expressed also in the Commission Guidance on the same article<sup>331</sup>, although the latter deals only with single and not collective dominance.

According to the Commission Guidance, (substantial) market power with respect to price-based competition is defined by reference to the lack of effective competitive constraints<sup>332</sup>. “Effective competition” is not defined in European competition law legislation, although the term has been widely used especially in the assessment of mergers. The concept is related to the meaning of restriction on competition under Article 101(1) TFEU, which lacks also precise meaning<sup>333</sup>.

The Commission Guidance, as well as the Discussion Paper on Article 82 that preceded it<sup>334</sup>, called for a more economic approach to the assessment of Article 102 cases, because this allows greater emphasis on efficiency and consumer welfare. Such an effects-based test does not necessarily mean fully quantifying and weighting all the costs and benefits of the alleged abusive behaviour<sup>335</sup>, as it may simply involve the

---

<sup>331</sup> Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, 2009/C 45/02, in particular section C.

<sup>332</sup> Paragraphs 23-24 of the Guidance Paper.

<sup>333</sup> One approach expressed in the little literature on the subject has been to argue that restrictions of competition for the purposes of Article 101(1) are restrictions of the economic freedom of other market participants (the ‘ordoliberal approach’). Such approach has been criticised for being more of a political than legal term and incapable of providing the required certainty to market participants (Monti, M., *Article 81 and Public Policy*, [2002] 39 CMLR 1057, Robertson, B., *What is a Restriction of Competition? The implications of the GC's judgement in O2 Germany and the Rule of Reason*, [2007] ECLR 255). Fairness and the competitor's freedom to compete have also been identified as objectives of the legislators (Mertikopoulou, V., *DG Competition's Discussion Paper on the Application of Article 82 to Exclusionary Abuses: the Proposed Economic Reform from a Legal Point of View*, [2007] ECLR., 243).

<sup>334</sup> DG Competition Discussion Paper on the application of Article 82 of the Treaty to exclusionary abuses, December 2005 (the ‘Discussion Paper’).

<sup>335</sup> Concerns have been expressed as to the lack of enough metrics in economic theory to calculate all parameters and values integrated in Art. 102, which renders a strict economic analysis of competition rules bearing the risk of overlooking the general context and principles of EC law, Mertikopoulou, V., *ibid*, 245.

consideration of a range of economic indicators of actual and likely competitive effects that go beyond the assessment of dominance, such as the degree of foreclosure of the market to competitors and possible efficiency benefits<sup>336</sup>.

Economic theory has defined efficiency in terms of consumer surplus (the difference between what a consumer is willing to pay for a service and what he actually pays), producer surplus (the difference between the price in the market that producers collectively receive for their products and the sum of those products' respective marginal costs at each level of output) and total welfare (i.e. effects on all markets bypassing the markets directly involved in the antitrust analysis)<sup>337</sup>. Microeconomic theory has also defined "efficiency" in three areas:

(i) allocative efficiency is achieved when the existing stock of goods and productive output are allocated through the price system to those buyers who value them most, in terms of willingness to pay or willingness to forego other consumption; (ii) production efficiency is achieved when goods are produced using the most cost-effective combination of productive resources available under existing technology; while (iii) dynamic innovation efficiency is achieved through the invention, development and diffusion of new products and production processes that increase social welfare"<sup>338</sup>.

In simple terms, from an economics perspective, the results aimed at by competition should be the means of linking business behaviour (more profit at less cost) to consumer welfare (best quality at the lowest price). In this line of thinking, the Commission has defined restrictions on competition efficiency both in terms of Article 101 and Article 102 by reference to appreciable negative effects on prices, output, innovation or the variety or quality of goods and services<sup>339</sup>.

---

<sup>336</sup> Niels, G., Jenkins, H., *Reform of Article 82: Where the Link between Dominance and Effects Breaks Down*, [2005] ECLR, 610. The so-called 'efficiency defence' can be invoked when the dominant company shows that the conduct in question is indispensable to generate efficiencies, that benefit also consumers, provided that competition with respect to a substantial part of the products concerned is not being eliminated (Article 82 Commission Guidance, par. 28-31). The concept of efficiency defence has been criticised as alien to competition case-law, refer to Dreher, M., Adam, M., *Abuse of Dominance under Reform – Sound Economics and Established Case Law*, [2007] ECLR 278-282.

<sup>337</sup> Camesasca, P., *European Merger Control: Getting the Efficiencies Right*, Intersentia Hart, London 2000, 40.

<sup>338</sup> *Ibid.*, 38.

<sup>339</sup> Commission Guidelines on the application of Article 81(3) of the Treaty, [2004] OJ C101/8, par. 24, Commission Communication, Guidance Paper, par. 11

In oligopolies, the assessment of the effectiveness of competition is a difficult exercise. If we could describe competitiveness in a given market through the use of a spectrum, the monopoly equilibrium would be found at one end, where the single monopolist or the perfect cartel achieves maximum profit in a market that cannot be challenged by entrants. The competitive fringe, with a sufficient number of players and with prices oriented to actual cost, would occupy the other end of the spectrum. However, the perception that a market may be found somewhere in the middle part of the spectrum does not necessarily imply that competition in that market is not effective, because market conditions may be such as to bring prices in the neighbourhood of the costs of production. In oligopolistic situations, competitive forces may range from full competition to virtually monopoly effects, depending on the characteristics of the market's structure.

Consumer surplus is always equal to the monopoly case when firms collude, as perfect collusion only implies splitting the monopoly profits by the number of firms in the market. Consumer surplus is significantly higher in Bertrand competition than under Cournot competition, when products are homogeneous and firms do not collude<sup>340</sup>. In practice, the existence of a competitive market structure is generally seen as indicating either the existence of many players or the existence of sufficient degree of competition to bring prices in the neighbourhood of the costs of production in the longer term<sup>341</sup>.

In the words of Briones and Padilla<sup>342</sup>,

“the main condition that distinguishes a competitive oligopoly from a dominant one is precisely whether market conditions make the collusive behaviour not so much rational, but possible and sustainable.

And it has to be possible in at least two directions. Firstly, with regard to the position of each oligopolist relative to the other members of the oligopoly:

---

<sup>340</sup> Maier-Rigaud, F., Wiesen, D., Parplies, K., *Experimental economics and competition policy: Unilateral and Co-ordinated Effects in Competition Games*, [2008] ECLR, 415.

<sup>341</sup> Kloosterhuis, E., *Joint Dominance and the Interaction between Firms* [2001] ECLR., 81.

<sup>342</sup> Briones, J., Padilla, A., *The Complex Landscape of Oligopolies under EU Competition Policy: Is Collective Dominance Ripe for Guidelines?* [2001] *World Competition*., 312.

hence the criteria of assessing symmetries and asymmetries among them. Secondly, in relation to the sustainability of collusion, that is, with regard to (i) the facility with which an individual member is able to deviate from the collusive behaviour; and (ii) with regard to likely reactions to external shocks. Hence the need to examine the transparency of the market in the context of retaliation, including again symmetries/asymmetries and type of relations with customers”.

In the context of regulation on electronic communications, ‘effective competition’ is designated among the primary targets of regulation. Article 1 of Directive 2002/21/EC, as replaced by Directive 2009/136/EC reads:

‘The aim is to ensure the availability throughout the Community of good quality publicly available services through effective competition and choice and to deal with circumstances in which the needs of the end users are not satisfactorily met by the market’.

Similarly, the intervention threshold of NRAs for asymmetric regulation on SMPs is set at a level where competition in the identified markets is not effective<sup>343</sup>. However, competition efficiency in network markets is not defined by reference to consumer surplus (many players or prices oriented to costs). Rather, recital 54 of Directive 2009/140/EC defines efficiency of infrastructure-based competition by reference to infrastructure duplication and fair return of investment of alternative operators:

“An efficient level of infrastructure-based competition is the extent of infrastructure duplication at which investors can reasonably be expected to make a fair return based on reasonable expectations about the evolution of market shares”.

Put differently, the Commission defines competition efficiency in network markets by reference to the existence of a profitable alternative infrastructure which can compete with the incumbent. This principle shows that, as matter of policy, there is little room left to NRAs for regulation in markets with more than one players, for as long as an

---

<sup>343</sup> Articles 8 and 16 of Directive 2002/21/EC, as amended by Directive 2009/140/EC, Article 17 of Directive 2002/21/EC. Recitals 5, 7 and 54 of Directive 2009/140/EC.

alternative provider exists of a size capable of competing with the incumbent, competition efficiency may be presumed<sup>344</sup>.

Lack of competition efficiency does not tantamount to elimination of competition between the members of the group. In the event, a certain degree of competition may exist in the relationship of interdependence between oligopolists<sup>345</sup>. Indeed, SMP regulation is a prevention mechanism against distortions of competition. Distortion of competition is rather different from lack of any price competition<sup>346</sup>, which indicates elimination of competition at least in the price level. The Guidelines take a similar stance by explaining in paragraph 72 that

‘a finding of a dominant position does not preclude some competition in the market’.

But, later on, in paragraph 103 they cite the Commission’s finding in MCI WorldCom/Sprint, which dismissed concerns of collective dominance on the grounds that

‘it was not able to show *absence* of competitive constraints from actual competitors’ [emphasis added].

Also, in the Guidance Paper, the Commission declares its intention to concentrate its enforcement on certain exclusionary abuse methods where the anticompetitive harm is seen likely. It is therefore not required that the anticompetitive effects have already been produced<sup>347</sup>. However, the next section will show that NRAs have

---

<sup>344</sup> Also, the Commission view on the efficiency of infrastructure-based competition ignores other parameters, such as quality, that come into play in the competition field. Such observation is particularly relevant for high technology environments such as telecommunications, where innovation plays a considerable role. Monopoly power in such environments has been defined as “not a situation of high market share; nor is it a situation where profits are high, or where prices are above marginal cost. Rather, a monopolist would be a firm shielded from other innovators or imitators. The monopolist could stay ahead without innovating or lowering prices. The crucial difference between monopoly and competition is that with competition market forces compel improvement in the product offerings available to the consumer. With monopoly, there is no such compulsion from the marketplace”. Teece, D., Coleman, M., *The meaning of monopoly: Antitrust Analysis in High Technology Industries*, [1998] Antitrust Bulletin, 824-825.

<sup>345</sup> In TACA, the Commission held that ‘the continued existence of a possible degree of competition between the parties does not rule out the finding of a collective dominant position’; Commission Decision 1999/243/EC [1999]4 CMLR 1454, par. 522.

<sup>346</sup> It is argued that even in single dominance cases, the appropriate test is not the complete elimination of competition in the market (Christensen, P., Rabassa, V., *ibid.*, 234-235).

<sup>347</sup> Finell, L., *The Article 82 Reform: Increasing the Incentives to Comply?*, [2009] World Competition, 286.

required proof of existence of anti-competitive behavior in order to consider potential concerns on lack of efficient competition in oligopolistic electronic communications markets.

### **3.1.2. Interpretation of lack of efficiency in NRA Decisions**

We shall now turn to see how the NRAs have applied the requirement for a finding of inefficient competition in the event of oligopolies in the pre-defined markets of the Recommendation.

In the period from the first notification in August 2003 until 30.09.2013, out of the total Article 7 notifications, which exceeded one thousand notifications, there have been in total 47 notifications involving markets with oligopolistic elements: 24 involving wholesale mobile access and call origination, 12 involving wholesale international roaming, 4 involving wholesale broadband access, 3 involving wholesale trunk segments of leased lines, 2 involving transit services in the fixed telephone network and 2 involving broadcasting transmission services. The relevant table may be found in the bibliography section.

With the exception of the cases on wholesale international roaming, where concerns arose from complaints for excessive rates at retail level, the main element for the cause of concerns for ineffective competition that were investigated by NRAs in their respective national markets in the other markets (mainly the market for mobile access and call origination) was access-related impediments.

An oligopoly, once it wishes to pursue monopolistic profits, would restrict their output beneath the competitive level, thereby making the supply below the actual demand. According to the Commission, if there is a common policy of not granting access to third parties by a collective SMP, it must be shown that pent-up demand exists, which means that it must be demonstrated that third parties have been denied access to the



networks of mobile networks operators despite their reasonable request<sup>348</sup>, i.e. that there are some customers that cannot be served. In other words, not granting access to third parties, must necessarily result in the appearance of a new service provider or an increased output in the related retail markets<sup>349</sup>.

The Italian NRA designated RAI and RTI as enjoying collective SMP on the national market for analogue TV broadcasting services. According to AGCOM, RAI and RTI maintained a huge amount of frequencies, which were not used in an efficient manner. This behaviour derived from a parallel conduct aimed at keeping the frequencies they owned in order to enjoy the advantages of the ownership of transmission facilities in order to have a coverage and quality for the broadcasting over their own networks that could not be easily duplicated with the further aim of maximizing their revenues in the downstream advertising market<sup>350</sup>. Notably, the maximisation of revenues in the downstream market was found to provide a rent to protect by the anti-competitive conduct in the upstream broadcasting services. The Commission did not raise doubts to the Italian decision, but one cannot but wonder if the Commission would keep the same stance on a market, which would not have a foreseeable termination date in view of the transition to digital markets, unlike wholesale analogue broadcasting<sup>351</sup>.

The appraisal of absence/existence of pent-up demand mainly depends on actual complaints about denial of access. Concerning the conditions under which a complaint of denial of access can be regarded as evidence of pent-up demand, the German NRA considered that a simple complaint of refusal to supply may be not sufficient; and that “denial of access only has to be examined if no offer at all exists on the market”<sup>352</sup>. In addition, the absence of pent-up demand can be proved either by no complaints of

---

<sup>348</sup> European Commission, *Accompanying Document to the Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on market reviews under the EU Regulatory Framework*, COM(2007) 401 final, 12.

<sup>349</sup> ES/2005/0330, MT/2006/0443, IE/2004/0121, MT/2007/0563.

<sup>350</sup> Case IT/2006/0424.

<sup>351</sup> A couple of years later, in IT/2010/1157 AGCOM found that the national terrestrial TV broadcasting market was no longer susceptible of ex ante regulation, taking account mainly of the forthcoming transition to digital technology and the implementation of the regulatory framework adopted by AGCOM. Despite these findings, AGCOM proposed to maintain existing regulation until analogue TV switch-off by 31 December 2012 to give affected third parties a reasonable period of notice to adapt to the unregulated environment and the Commission expressed no comments.

<sup>352</sup> DE/2007/627.

denial of access in the relevant market<sup>353</sup>, or the incumbent mobile network operators voluntarily granting access to third parties<sup>354</sup>.

It is noteworthy that the existence of pent-up demand is found in all three collective SMP positive decisions involving the market for mobile access and call origination, while in the other decisions, almost all NRAs found no evidence of any<sup>355</sup>. In the Maltese wholesale market for broadband access, there were two undertakings, but only the first Maltacom opened its network to third party service providers, as a result of regulation, and the second (Melita Cable) not granting access at all. Based on the market's characteristics conducive to tacit collusion, the Maltese NRA reached a conclusion of the existence of pent-up demand, i.e. of customers that could not be served<sup>356</sup>. In particular, the NRA was concerned that without the current access regulation Maltacom would have a strong incentive to discontinue its wholesale offer and establish a collective SMP with Melita Cable, hence, designated the two undertakings as holding collective SMP. However, the Commission expressed serious doubts on the grounds that Maltacom would not risk losing wholesale revenue for third parties offering retail broadband services to 30% of the retail market without a guarantee of gaining the retail customers. The notification was subsequently withdrawn by MCA, who decided on re-notifying the case that there was no collective SMP mainly by the reason of the entry of a newcomer who, despite the low market share at the time, had quickly established a wireless broadband network covering the whole territory of Malta with new wireless technology, capable of exercising competitive pressure on the two fixed broadband operators, who were originally considered capable of establishing collective SMP<sup>357</sup>. Some years later in MT/2012/1375, MCA observed that –albeit no measures were taken against the two operators- the retail offers of both had considerably improved in terms of prices, speeds and download limits and that the broadband market had, in the meantime,

---

<sup>353</sup> SK/2006/0442, LU/2006/0369, IT/2005/0259, HU/2004/0096, CZ/2006/0405, EL/2006/0492, GE/2007/0627.

<sup>354</sup> SE/2005/0203, LT/2006/0406, LV/2006/0545, BE/2007/0610, PL/2008/0756, UL/2003/001, AT/2004/063, DK/2005/0243.

<sup>355</sup> The value of pent-up demand to the assessment of collective SMP is, in particular, witnessed in the Commission decision concerning BE/2007/0610, where the conclusion of an absence of collective SMP on the market for mobile access and call origination is entirely based on absent pent-up demand, without having recourse to any other criterion

<sup>356</sup> MT/2007/563.

<sup>357</sup> MT/2008/0803, following the expression of serious doubts by the Commission on the finding of joint dominance in the market under MT/2007/0563.

featured increased product differentiation with the provision of a vast array of bundles. Such features, coupled with the prospect that new fibre-based infrastructure will be rolled out, resulted in insufficient evidence to support a finding of joint dominance.

The fact that at the wholesale level no access to third parties is granted does not *per se* mean that the market is anti-competitive. Competitive conditions at retail level are of crucial importance: they may provide an indicator or a rent to protect by the refusal to grant access at the wholesale level. Past market conduct may be also taken into account, since markets with history of cartel behavior are likely to be susceptible to cooperation<sup>358</sup>. In SI/2008/806, the Commission challenged the finding of joint dominance between the two biggest mobile operators in the mobile access market on the grounds of the degree of retail price competition, lack of evidence on the existence of the joint refusal to grant access and that past retail price movements allow clear conclusions on future behaviour of the undertakings.

It is, therefore, noted that the practice followed both by NRAs and the Commission, also in consistency with the approach to light-handed regulation, is the decision to intervene in cases of established anticompetitive effects. Such approach resembles more to an examination of Article 102 cases, i.e. where the abuse has already occurred, than *ex ante* regulation. However, it is recognized that this observation is more of theoretical value, since this work is not in a position to suggest a specific case where intervention should have been warranted, on the basis of indications for future abuse, as opposed to effects that have already occurred. On the contrary, it is acknowledged that the Commission's approach to the Malta cases on wholesale broadband access was proved to be correct, since the theoretical concerns of the Maltese NRA on future impediments to competition were proved incorrect and prices fell despite the lack of *ex ante* regulatory measures on the two operators of the duopolistic market.

### **3.2. Factors affecting the creation of collective dominance**

---

<sup>358</sup> Evidence of past coordination was taken into account for the sustainability of concerns on future collusion in *Nestle/Perrier* and *Gencor/Lonrho*. However, in Cases C-68/94 and C-30/95, *France v. Commission*, the Commission attached limited weight to past conduct for the purposes of merger assessment.

On top of the requirement for a finding of inefficient competition, European competition law has established a number of factors that are considered to affect the creation of collectively dominant positions. These factors are based on the findings of economic literature and apply to any collusion between market players, whether explicit or tacit<sup>359</sup>, since cartels also often occur in markets where normal competition is itself imperfect<sup>360</sup>.

The Framework Directive summarises the factors that NRAs should take into account in assessing significant market power for the purposes of electronic communications regulation in Annex II<sup>361</sup>. In this Annex, market concentration is considered indispensable for the establishment of joint SMP, if coupled with other factors, notably:

- low elasticity of demand,
- similar market shares,
- high legal or economic barriers to entry,
- vertical integration with collective refusal to supply
- lack of countervailing buying power,
- lack of potential competition.

The revised list of Annex II is considerably shorter than the list of the original Framework Directive, which included also the following factors:

- mature market,
- stagnant or moderate growth on the demand side,

---

<sup>359</sup> Alfter, A., Jount, J., *Economic Analysis of Cartels – Theory and Practice*, [2005] ECLR, 548. However, explicit coordination may allow the cartel members to co-ordinate on a price level higher than the one that could have been achieved under tacit co-ordination. Further, explicit agreements may make it easier to monitor an agreement that has been established and may allow coordination with a larger number of firms than would be possible absent explicit communication.

<sup>360</sup> *Ibid.*, 557.

<sup>361</sup> Article 14 of the Framework Directive.

- homogeneous product,
- similar cost structures,
- lack of technical innovation, mature technology,
- absence of excess capacity,
- various kinds of informal or other links between the undertakings concerned,
- retaliatory mechanisms,
- lack or reduced scope for price competition.

Although it is explicitly stated in the Annex that the listed factors are indicative, the removal of transparency and retaliation from the list is surprising in view of the significant emphasis placed on these two factors by European case-law and economists for the finding of on collective dominance<sup>362</sup>.

The Guidelines are very poor in the analysis of the factors in terms of their application for the purposes of SMP regulation. The following sections will examine how NRAs have applied these factors in practice.

### **3.2.1 Market Concentration**

#### **3.2.1.1 The number of players**

Collective dominance occurs in highly concentrated markets with a small number of players, who recognize their interdependence and the futility of aggressive behavior<sup>363</sup>. A high degree of concentration will increase the risk of collusion, because in a market with a reduced number of firms, there is less incentive to deviate from the common agreement since the detection is more likely<sup>364</sup>.

---

<sup>362</sup> Refer to the discussion in section 1.1.2.

<sup>363</sup> Kokkoris, I., *The Development of the Concept of Collective Dominance in the ECMR. From its Inception to its Current Status*, [2007] World Competition, 420.

<sup>364</sup> Kokkoris, I., *ibid.*, 427.

The concept of joint dominance has not been defined by reference to specific numbers of players involved in the game. However, the type of interdependence, which is necessary for the establishment of collective dominance, is the result of market conditions that are more frequent in oligopolistic markets, such as product homogeneity or the existence of high entry barriers, that increase the possibility of conscious parallelism between the parties, which means that all players adopt more or less the same stance towards the market.

In *Price Waterhouse/Coopers & Lybrand*<sup>365</sup> the Commission was reluctant to consider collective dominance in oligopolistic markets involving more than two major players because of the complexity of the interrelationships involved and the consequent temptation to deviate<sup>366</sup>. One year later, in *Airtours/First Choice*, the Commission took a different approach and refused to clear the merger on the grounds that it would strengthen the oligopoly of the remaining three big operators, who would collectively hold a dominant market share of approximately 70%. Until then, collective dominance had been found in dominant duopolies only.

The wording adopted by the Commission in *Airtours* does not preclude a finding of joint dominance in oligopolies of more than three firms, depending on the characteristics of the market's structure<sup>367</sup>. But, in *SONY/BMG*<sup>368</sup>, the Commission did not find sufficient evidence that a reduction from five to four of the world-wide active record companies would facilitate transparency and retaliation to such an extent that the creation of a collective dominant position of the remaining four majors would be anticipated as a likely outcome.

As repeatedly stated in the context of this thesis, it does not follow that, because a market is oligopolistic, the firms will necessarily tacitly collude and become collectively dominant. It is the particular characteristics of the oligopolistic market that

---

<sup>365</sup> Case IV/ M. 1016 *Price Waterhouse/Coopers & Lybrand* [1999] OJ L 50/27, para. 103.

<sup>366</sup> This position was criticised as surprising and dogmatic, refer to Cook & Kerse, *ibid.*, 172.

<sup>367</sup> Refer, e.g. to par. 53 of the decision.

<sup>368</sup> Case M.3333, *Sony/BMG*, [2005] OJ L62/30. The decision was annulled by the GC Case T-464/04, *IMPALA v. Commission*, judgement of 13.7.2006, which is the first case to annul a Commission decision clearing a merger on the grounds of the evidence pleaded by the Commission, but was subsequently overturned by the CJEU in Case C-413/06 published on July 10, 2008.

contribute to successful co-ordinated behaviour and lead to tacit collusion<sup>369</sup>. Indeed, economic analysis has suggested that in mobile markets, increasing the number of mobile operators does not necessarily tantamount to better competition, because incentives to invest and innovate are minimised by operators to cope with lower returns<sup>370</sup>. Market experience across large and small markets suggests that the right number is less than five; probably three or four<sup>371</sup>.

On the other hand, experimental economists have concluded that changing the number of competitors in any given market from four to two and vice versa, can have large effects on behaviour and market outcomes, because the vast majority of participants in an oligopoly manage to sustain a collusive outcome in the two-firm Bertrand game<sup>372</sup>. Conversely, experiments have shown that moving from two to four firms made collusion substantially harder to sustain under both Bertrand and Cournot competition<sup>373</sup>. As the number of sellers increases and the share of industry output supplied by a representative firm decreases, individual producers are increasingly apt to ignore the effect of their price and output restrictions on rival reactions and the overall level of prices. In addition, as the number of sellers increases, so also does the probability that at least one will be a maverick, pursuing an independent, aggressive pricing policy<sup>374</sup>.

It is reported that the ‘disappointing performance’ with respect to long-distance services in the Australian telecommunications market until 1997 might be explained by the fact that this market remained a duopoly until 1997, whereas in the US and Chile mobile prices substantially decreased only after at least three operators started to operate in most geographic areas<sup>375</sup>. In its Implementation Report for 2012-2013, the

---

<sup>369</sup> Kokkiris, I., *ibid.*, 423.

<sup>370</sup> Waters, P., *Mobile Competition: How many is too many?*, [2005] CTLR, 55-59. The scenario has materialised in Hong Kong, where six operators are active and the rates are the cheapest in the world, but 2G operators are said to struggle for survival.

<sup>371</sup> *Ibid.*, 58.

<sup>372</sup> Maier-Rigaud, F., Wiesen, D., Parplies, K., *ibid.*, 415.

<sup>373</sup> *Ibid.*, 414.

<sup>374</sup> Scherer, F. M., Ross, D., *ibid.* 277. However, according to the GC’s judgement in *Airtours*, the numerous acquisitions made by the large operators in the recent past were indicative of strong competition between those operators (par. 111f).

<sup>375</sup> Geradin, D., Kerf, M., *Controlling market power in telecommunications*, OUP, 2003, 325-326.

European Commission noticed increased price pressure in Member States where the number of mobile operators has increased from 3 to 4 main players<sup>376</sup>.

However, in the EU electronic communications markets, collective dominance issues were established only in markets where the numbers of the active market player are two<sup>377</sup> and in the case of ES/2005/0330 no more than three. Nevertheless, there were also NRAs who undertook collective SMP assessment in markets with more than three market players, though they did not find collective SMP in the end<sup>378</sup>.

In MT/2012/1349, the Maltese NRA opened the mobile access and call origination market to competition, when a third mobile operator with considerable penetration rates started to operate in the previously duopolistic market structure and the NRA established the conclusion of two access agreements with two MVNOs. Some years earlier, the Maltese NRA had also shown that the broadband access market displayed a number of characteristics that could make it conducive to coordinated behaviour, like high and similar market shares, highly concentrated market, similar costs and prices, market transparency, market approaching maturity and lack of countervailing buyer power, but concluded against a finding of joint dominance on the evidence of increased retail competition and the presence of a third infrastructure operator having a constraining effect on the potential coordinated strategy between the two biggest players<sup>379</sup>.

The Commission is also relaxed in the presence of three players in the market, unlike duopolistic market structures<sup>380</sup> and this is shown also in a number of merger cases. In *TeliaSonera/Orange*, the Commission cleared the merger between the third and fourth (in market shares) mobile operator in Denmark, despite the reduction of operators from

---

<sup>376</sup> European Commission, Staff Working Document - Implementation of the EU regulatory framework for electronic communications – 2014, at p. 8.

<sup>377</sup> IE/2004/121, IT/2006/424, MT/2007/0563.

<sup>378</sup> In CZ/2006/0448, there were 10 undertakings operating in the market for fixed transit services.

<sup>379</sup> Case MT/2008/0803.

<sup>380</sup> Stoyanova, M., *ibid.*, 2008, Kluwer, 192, argues that a concentration in telecoms that changes the market structure to a duopoly is very likely not to get regulatory approval. However, in Case COMP/M.4204, *Cinvin/UPC France*, 13.7.2006, the Commission established that the concentration did not create any (single nor joint) dominance nor any significant impediments to competition because of the platform independency in the definition of the product market for distribution of pay-TV. Each cable operator was considered a monopoly in its zone of operation, but this was deemed reasonable, as the only way to sustain a profitable investment. co-ordinated effects were established, in view of the strong efforts deployed by all cable operators to increase penetration vis-à-vis satellite operators.



four to three, on the grounds that the proposed transaction was not expected to significantly change the Danish market for mobile telephony, which was expected to be competitive in the future<sup>381</sup>. The combined entity would hold a <25% market share, whereas the market was considered saturated, characterised by strong price decrease, the lowest in the EU, which, in turn, impacted on the low level of switching costs and volatile market shares.

In *T-Mobile/Orange Netherlands*, which involved the merger of the 3<sup>rd</sup> and 4<sup>th</sup> (out of the 4) mobile operators in the Netherlands, the Commission examined the existence of coordination both before and after the merger and reached a negative conclusion in both cases, primarily due to the lack of transparency in the market and the existence of fringe competitors<sup>382</sup>. At wholesale level, the merger was found not to significantly affect competition, because of the existence of excess capacity, particularly in the hands of the largest operator KPN<sup>383</sup>.

On the other hand, the elimination of the third competitor (out of a total of three) in the Belgian mobile market was the reason for the expression of serious Commission doubts in relation to the impact of the concentration on the market in *FT/Orange*. Despite the low market share of one of the two merging operators, the Commission considered that it exerted significant pressure in breaking the duopolistic pricing behaviour of the other two operators, coupled with indications of high barriers to entry, collusive behaviour, transparency and non-differentiation of pricing structures<sup>384</sup>.

However, in *BT/Esat*<sup>385</sup>, the Commission did not consider the elimination of BT as the third player in the dedicated internet access market in Ireland to create a duopoly, despite the combined market shares of the parties amounting to 30%-40%. The capacity of Eircom as the largest market player, together with the existence of several small players holding together less than 10% market share influenced positively the Commission's approach to the merger. The Commission took also into account the existence of fluctuating market shares, technological developments and the increasing

---

<sup>381</sup> Case COMP/M.3530, *TeliaSonera AB/Orange AS*, 24.9.2004. The decision was issued in the context of the new ECMR.

<sup>382</sup> Case COMP/M. 4748, 20.08.2007, par. 43f.

<sup>383</sup> *Ibid.*, par. 47f.

<sup>384</sup> Case COMP/M.2016, *France Telecom/Orange*, 11.8.2000, par. 28.

<sup>385</sup> Case COMP/M. 1838, *BT/Esat*, 27.3.2000.

demand for Internet access services, as well as the expectance of new entries by TV companies (cable and digital) and product differentiation, although the details given in the decision are very few to allow the review of the Commission' s choice.

In *T-Mobile/Orange*, the Commission expressed concerns on the effects of the merger on wholesale access and call origination, because the merger could drive also 3UK out of business, through the compromise of its 3G RAN-sharing agreement with the merging parties, hence, lead to market concentration from 5 to 3 operators<sup>386</sup>. The merger was cleared on condition of commitments towards 3UK for the continuation of agreements and divestment of part of the spectrum held by the entities to third parties.

The *Carphone Warehouse/Tiscali UK* merger was examined in terms of coordinated effects in the residential segment of the retail broadband market, because the transaction resulted in a market structure where the three largest players (including the notified undertaking) held near-symmetric shares. The concerns were dismissed, because of the high customer switching rates, the complexity and diversity of the players' cost structures, non-homogeneous product offers and the pressure exercised by the competitive fringe<sup>387</sup>.

In *Cisco/Scientific Atlanta*<sup>388</sup>, a horizontal merger between providers of products for the delivery of content over networks (Internet networking equipment, set-top boxes etc.), the Commission held that the existence of three remaining competitors against the combined entity, holding similar market positions and coupled with "not significant" barriers to entry, did not create competition concerns, although interoperability of products was accepted as a factor affecting potential switch of suppliers.

---

<sup>386</sup> Case COMP/M.5650, 1.3.2010. The concerns were reinforced because the JV might be the only possible undertaking able to offer LTE (4G) services due to the amount of spectrum held by the two separate undertakings.

<sup>387</sup> Case COMP/M. 5532, 29.06.2009, par. 77-78. In the market for the provision of fixed-line telephony services to end-customers in the UK the combined entity holds 31% in terms of minutes, but <20% in terms of revenues, with low entry barriers.

<sup>388</sup> Case COMP/M.4063, *Cisco/Scientific Atlanta*, 22.2.2006.

However, the Commission approved the merger of the two out of three suppliers of data clearing services in the EEA in *Syniverse/BSG*<sup>389</sup> unconditionally, on the grounds that none of the parties exerted significant constraint on the other. The Commission took the view that the continued consolidation of MNOs and the sophisticated bidding processes followed in the market created countervailing buyer power, which, coupled with the lack of capacity constraints, did not allow adverse unilateral effects on competition. The Commission did not express concerns on coordinated effects on the grounds that common understanding is not feasible due to the sophisticated bidding processes, which also reduces transparency and the possibility for swift retaliation in the course of the tender, whereas new competitors are also expected to enter the market<sup>390</sup>.

On 12.12.2012, the Commission cleared the merger between Orange and Hutchison 3G in Austria, which lead to the elimination of the fourth mobile operator in the Austrian market, under strict commitments from the parties to alleviate the concerns of the Commission on the increase of prices in the mobile services market to the detriment of consumers<sup>391</sup>. The commitments included divestment of radio of spectrum and additional rights to an interested new entrant in the Austrian mobile telephony market. The potential new mobile network operator would have the right to acquire spectrum not only from H3G but also additional spectrum at an auction planned in 2013 by the Austrian NRA. The latter would reserve spectrum for a new entrant, in order to enable such an operator to build up a physical network for mobile telecommunication services in Austria. The new entrant would also benefit from privileged conditions for the purchase of sites for building up its own network in Austria. H3G also committed to provide, on agreed terms, wholesale access to its network for up to 30% of its capacity to up to 16 mobile virtual network operators in the following 10 years, in order to increase consumer choice and the offer of mobile telecommunications services to end customers in Austria at competitive terms and conditions and the merger would be completed only after the execution of such wholesale access agreement by H3G.

---

<sup>389</sup> Case COMP/M. 4662, 4.12.2007.

<sup>390</sup> Par. 104f of the decision.

<sup>391</sup> Case COMP/M.6497/Hutchison 3G Austria/Orange Austria.

### 3.2.1.2. Market Shares

In the realm of the effects-based approach to dominance, there is no presumption of dominance on the basis of specific market share thresholds, in the sense that market shares alone cannot make a firm fall foul of Article 102 TFEU<sup>392</sup>. The efficiency of pure market share analysis in markets characterized by a high degree of product differentiation has been challenged<sup>393</sup>, since

“such analysis implicitly gives no weight to the competitive influence of products outside the defined market and gives weight to products within the market in direct proportion to their market shares”<sup>394</sup>.

In addition, market shares are not a reliable proxy of market power if rivals can increase output in response to a price increase<sup>395</sup>, whereas they fail to take into account competitive pressures exerted by firms not yet operating on the market, but with capacity to enter it. Hence, concentration thresholds can provide no more than an initial screen for a detailed case-specific competitive assessment<sup>396</sup>.

The period over which market shares are computed and the relevant volume or value are considered instrumental for the use of market shares in market power analysis<sup>397</sup>. The Guidelines refer both to volume sales and value sales favouring the former method when dealing with homogeneous (or bulk) products and the latter in the case of differentiated products<sup>398</sup>, but, the criteria to be used to measure the market share of the undertaking(s) concerned will depend on the characteristics of the relevant market<sup>399</sup>. The Guidelines identify reference to value sales in wholesale markets with the firm's earnings in the specific market:

---

<sup>392</sup> Even super-dominance, which was considered to define firms holding market shares in excess of 90%, has been regarded as ‘a thing of the past’, Appeldoorn, J., *He Who Spareth his Rod, Hateth his Son? Microsoft, Super-dominance and Article 82 EC*, [2005] ECLR, 657.

<sup>393</sup> Baker, S., Coscelli, A., *The Role of Market Shares in Differentiated Product Markets* [1999] ECLR 412.

<sup>394</sup> Baker, S., Coscelli, A., *ibid.*, 413-414.

<sup>395</sup> Dethmers, F., Dodoo, N., *The abuse of Hoffmann-La Roche: the meaning of dominance under EC Competition Law*, [2006] ECLR, 543.

<sup>396</sup> Maier-Rigaud, F., Wiesen, D., Parplies, K., *ibid.*, 409.

<sup>397</sup> Dethmers, F., Dodoo, N., *ibid.*, 541.

<sup>398</sup> Para. 76.

<sup>399</sup> Para. 77.

“the use of revenues, rather than for example call minutes, takes account of the fact that call minutes can have different values (i.e. local, long distance and international) and provides a measure of market presence that reflects both the number of customers and network coverage”<sup>400</sup>.

It is noted, though, that significant differences in market shares calculated in terms of volume and in terms of value may indicate that certain products may constitute separate relevant product markets<sup>401</sup>.

The Guidelines take the view that market shares comprise the starting point of the assessment of market power, on the grounds that it is unlikely that undertakings with low market shares may exercise significant market power<sup>402</sup>. In oligopolistic environments no certainty may be created on the basis of such statement, since small market shares may be consistent with market power, like in the case of several colluding firms with small market shares<sup>403</sup>.

Unlike single dominance, the Commission has been reluctant in giving instructions on the market share threshold for the assessment of joint dominance. Earlier drafts of the Guidelines set such threshold at 25%<sup>404</sup> and defined “normal” concerns of dominance

---

<sup>400</sup> *Ibid.* Navarro, E., Font, A., Folguera, J., Briones, J., *Merger Control in the EU, Law Economics and Practice*, Oxford University Press, 2002, 153 argue that the Commission’s practice in merger cases, in general, is to calculate market shares according to operator’s annual turnover (by value), which allows relatively different or heterogeneous products (fundamentally as regards price) to be added together, e.g. Case IV/M 190 *Nestle/ Perrier* [1992] OJ L365/1 and, further, that measuring market shares by volume (units sold or production capacity) may be more appropriate in markets where there is an excess of production capacity, like electronic communications, because high revenues may be an indicator of high profit margins, depending on the firm’s financial policy. Even the more so, when inevitable cross-subsidisation in the firm’s activities in different markets resulting from the firm’s overall policy may create misleading impressions as to dominance, where demonstration of low profits in one market is due to subsidies received by the firm’s products in another market. The Commission has also favoured this approach in merger cases in other network industries, e.g. Case IV/ M 1088, *Thomson/ Friditresor*, Case IV/ M 157 *Air France/ Sabena*, Case IV/ M 490 *NSD*.

<sup>401</sup> Case IV/ M 1357, *Nordic Capital/ Hilding Anders*, 1999.

<sup>402</sup> Para. 75.

<sup>403</sup> Arowolo, O., *Application of the Concept of Barriers to Entry under Article 82 of the EC Treaty: is there a Case for Review?*, [2005] ECLR, 252.

<sup>404</sup> A presumption in favour of dominance in market shares in excess of 25% can be also made from recital 32 of the preamble of the ECMR. The 25% threshold has also been defined by scholars as the threshold for single dominance (Wish, R., *Competition Law*, Butterworths, 2001, 153, Cook, C.J., Kerse, C.S., *EC Merger Control*, 3<sup>rd</sup> ed., Sweet & Maxwell, 2000, 153.

for undertakings with market shares above 40%<sup>405</sup>. The adopted text of the Guidelines omits reference to 25% and clarifies that the 40% threshold applies for the calculation of “single” dominant positions only<sup>406</sup>. In the Block Exemption Regulation on vertical agreements, a definite safe harbour is created for single dominance with the exemption itself for companies having less than 30% market share<sup>407</sup>.

No similar clear guidance is provided for joint dominance, but the clarification that the 40% threshold applies on single dominance implies that the individual thresholds for each of the colluding firms may be lower than 40%. Similarly, the Commission does not distinguish between single and joint dominance for market shares above 50%, which are considered, save as in exceptional circumstances, evidence of the existence of a dominant position<sup>408</sup>, but it is argued in literature that the presumption of dominance in market shares of 50% or more should apply only to cases of single and not collective dominance<sup>409</sup>, because in oligopolistic markets there is a number of other factors that are likely to influence a finding against dominance.

As observed by Hou, in their market assessments, the NRAs have examined collective dominance issues only in cases where the first largest undertakings’ market shares are less than 60%, whereas single dominance issues arise in NRA notifications for undertakings with a market share exceeding 60%<sup>410</sup>. Indeed, in SI/2009/913, which followed the withdrawal of a previous notice indicating joint dominance on the market for mobile access and call origination, APEK established single dominance of Mobitel, which was claimed to hold market shares in excess of 60% and 70% in terms of voice

---

<sup>405</sup> Draft Guidelines on market analysis and the calculation of significant market power under Article 14 of the proposed Directive on a common regulatory framework for electronic communications networks and services, COM (2001) 175, 28.3.2001

<sup>406</sup> Para 75 of the Guidelines. The same position is taken in par. 31 of the Discussion Paper and par. 14 of the Guidance Paper.

<sup>407</sup> Commission Regulation (EC) No. 2790/1999 of 22 Dec. 1999 on the application of Art. 81(3) of the Treaty to categories of vertical agreements and concerted practices, Art. 6.

<sup>408</sup> Par. 75 of the Guidelines.

<sup>409</sup> Whish, *Competition Law*, 4<sup>th</sup> edition, 2001, 485, Richardson, R., Gordon, C., *ibid.*, 417. In *Airtours*, the Commission established joint dominance for collective market shares of 60-70%.

<sup>410</sup> Hou, L., *Collective Dominance within the context of EU electronic communications regulation*, [2009] *Competition and Regulation in Network Industries*, vol. 10, 288, who also argues that this finding also tallies with the research of Davies, Olczak and Coles (2007) in the area of EC merger control, who tend to reach a conclusion that when the largest firm with more than 60% market share would be considered to have single dominance and only below 60% would generate concern on collective dominance.

traffic and voice revenues respectively (including self-supply)<sup>411</sup>. On the same product market, in PL/2010/1147, the Polish NRA examined potential joint dominance issues between the three largest MNOs (Polkomtel, PTC and PTK), who had in 2009 market shares between 29% and 33% in terms of end users, but concluded against such finding, because P4's market shares were found to be growing, reaching 7.7% in 2009 and because of the presence of two other small MNOs and 12 MVNOs, albeit these generated slightly less than 1% of the market.

Economic theory has accepted that even the creation of a market share of less than 25% could give cause for concern in the context of an oligopoly<sup>412</sup>. The scenario was identified in *Airtours/First Choice*, where the market shares of the collectively dominant parties ranged from 20.4% to 34.4%.

In NRA notifications that examined concerns of joint dominance, all the second largest undertakings' market shares are above 24%<sup>413</sup>. This figure accords with a report of the Competition Commission in the UK<sup>414</sup> that once an MNO (mobile network operator) has captured 20%-25% of the market volume, there are very limited remaining economies of scale for mobile network operators who have captured 20-25% of the market volume:

‘Although it is not clear whether the figure (20%-25%) in this report can also apply to other electronic communications markets, it is of no doubt that there must be a threshold in terms of market shares in every market above which the average cost of an undertaking increases when its output grows. If there is still scope of economies of scale, the newcomers may have incentives to increase their outputs in order to lower down their costs and consequently may have no incentive to establish collective SMP with the largest undertakings, in most case namely the incumbents that have already achieved economies of scale before the liberalisation. Only after achieving this threshold the newcomers may possibly consider tacit collusion with the undertakings enjoying economies of scale. Therefore, this 24% market share may imply the lowest

---

<sup>411</sup> However, the Commission requested further evidence on the substantiation of Mobitel's dominant position.

<sup>412</sup> Etter, B. , *The Assessment of Mergers in the EC under the Concept of Collective Dominance* [2000] *Journal of World Competition*, 105.

<sup>413</sup> *Ibid.*

<sup>414</sup> Quoted in ES/2005/0330.

market share above which the second largest undertakings achieve economies of scale'<sup>415</sup>.

In the area of merger control in the electronic communications sector, the Commission has cleared mergers where the parties' combined market shares did not exceed 30% unconditionally<sup>416</sup>. Combined market shares in excess of 30% (and less than 40%<sup>417</sup>) have been also cleared where other factors like the existence of credible competitors with comparable market size, award of contracts through tenders, standardisation of interfaces enabling interoperability<sup>418</sup> or the existence of strong competition at pricing level<sup>419</sup>. In *France Telecom/STI/SRD*<sup>420</sup>, the Commission dismissed concerns on the parties' combined market shares (30% - 40%) because the Portuguese market for dedicated access to ISPs was found to be rapidly growing and also in the light of the higher market shares of the incumbent operator Telepac<sup>421</sup>.

In the *Alcatel/Lucent*<sup>422</sup> and *Nokia/Siemens*<sup>423</sup> decisions, the Commission has examined the mergers between providers of telecommunication equipment, which were all active in several submarkets. Despite the limited number of players in most of these markets, the Commission has conducted detailed market share analysis of all

---

<sup>415</sup> Hou. L., *ibid.*

<sup>416</sup> Case COMP/M.4003, *Ericsson/Marconi*, 20.12.2005, Case COMP/M. 1982, *Telia/Oracle/Drutt*, 11.9.2000, Case COMP/M. 1747, *Telekom Austria/Libro*, 28.2.2000, Case COMP/M. 4034, *Telenor/Vodafone Sverige*, 20.12.2005. In the last case, the Commission also dismissed concerns of third parties on potential bundling with products offered by other subsidiaries of Telenor in other markets, on the grounds of low market shares and the ability of other operators to do the same. Similar concerns were also dismissed in *TA/Libro* in the market for sale of digital mobile handsets for pre-paid cards or contracts, despite TA's high market share in the mobile market (>50%), not only because of the offer of several alternatives in the purchase of handsets and mobile contracts in the market, but also because TA's market share was decreasing and in new subscriptions TA's market share was the same as its competitor MaxMobil (35%-45%).

<sup>417</sup> However, in Case COMP/M.3411, *UGC/Noos*, 17.5.2004, the Commission decided to clear the concentration, although it acknowledged that, had a narrower market definition been adopted, the combined market shares of the parties would exceed 40%. It appears that the existence of France Telecom as a powerful competitor has influenced the Commission's decision to clear the merger.

<sup>418</sup> *Ericsson/Marconi*, *ibid.* Conversely, combined market shares in excess of 60% create serious doubts for competition in the respective markets, Case IV/M.2300, *Yle/Tdf/Digita JV*, 26.6.2001.

<sup>419</sup> Case COMP/M.2257, *France Telecom/Equant*, 21.3.2001.

<sup>420</sup> Case COMP/M.1679, *France Telecom/STI/SRD*, 21.10.1999.

<sup>421</sup> Also in Case COMP/M.4417, *Telekom Italia/AOL German Access Business*, 28.11.2006. Case COMP/M.4217, *Providence/Carlyle/UPC Sweden*, 2.6.2006. The reader notes an inconsistency between the geographic definition of the relevant cable market (network-based), which supports a limited horizontal overlap between the merging parties, with the calculation of market shares nation-wide, which supports the existence of three major cable operators accounting for 85% of the total national market.

<sup>422</sup> Case COMP/M.4214, *Alcatel/Lucent Technologies*, 24.7.2006.

<sup>423</sup> Case COMP/M.4297, *Nokia/Siemens*, 13.11.2006.



players and cleared the mergers unconditionally, albeit the combined market shares of the parties were considered between 30-40% or even in the region of 50%<sup>424</sup>, which would render the entities strongest or second strongest players in some of these markets in the EEA. The clearance was based on the premise that markets for telecommunications equipment were generally considered competitive by the parties' customers (network operators) even in markets where the joint market share of the combined entity and the major player would reach 60-70%<sup>425</sup>. Possible concerns that may have arisen out of allegations on the existence of two major suppliers were dismissed on the finding of a third credible operator<sup>426</sup>.

In the same line, the *Cisco/Tandberg* merger, which raised competition concerns in the VCS (dedicated room solutions) market because of the combined shares of the parties (30-40%), which were closest competitors before the merger, and of the barriers linked to interoperability of Cisco's equipment, was not considered to raise significant constraints in the multi-purpose room solutions, because of Cisco's minimal addition on Tandberg's shares and the presence of other competitors and lack of significant interoperability problems. It is noted, though, that the potential of coordinated effects with other competitors of a similar size were not examined and it is not clear from the information published in the non-confidential version of the case, if the addition of Cisco's shares increases the symmetry of shares between the two biggest competitors in the global market<sup>427</sup>.

Potential market share thresholds in oligopolistic markets capable of establishing joint SMP are left open in the Guidelines and, as a result, the review of the notifications made by NRAs in the context of Article 7 of the Framework Directive demonstrates

---

<sup>424</sup> The combined market share of Alcatel/Lucent in the DSLAM market was found to range between 40-50%. It is noted that 4 months later, in *Nokia/Siemens Alcatel/Lucent*'s market share was found to have been increased to 50-60%.

<sup>425</sup> *Nokia/Siemens*, par. 90. Collective dominance was also considered unlikely to appear in the future because of rapid technological developments in the mobile sector.

<sup>426</sup> *Ibid.*, par. 75. A similar approach was also followed in *Avaya/Nortel*, Case COMP/M.5607, 18.11.2009. The high percentages of the parties combined market share in the PBX market (circa 30%) were considered to over-estimate the actual market presence of the parties, since the majority of their sales was done to existing customers for upgrades/updates, other major players were operating globally and players from neighbouring markets had recently entered the market and mainly in view of the limited length of contracts, overridden technology and Nortel's weak financial position.

<sup>427</sup> Case COMP/M.5669, 29.03.2010.

that individual market shares are not considered unless in excess of 40%, regardless of the collective market share that they may hold with other market participants. For example, in Case HU/2007/0739, in assessing the effectiveness of competition in the wholesale market for trunk segments of leased lines the Hungarian NRA did not examine the prospect of collective dominance by the four market players holding 35,3%, 27,2%, 17,1% and 15,1% respectively and dismissed concerns of single dominance primarily on the grounds that the largest operator's market share was below 40%. In Case AT/2008/0757, the Austrian NRA did not place weight on the 30% market share held by the second largest operator in the broadband access market, whereas the Commission in its comments invited the NRA to monitor the competitive pressure to be exercised on the former incumbent by the second operator in the future, but did not raise the potential of their joint influence on the market.

The review of notifications made in the context of Article 7 of the Framework Directive also shows that NRAs examine prospective collective dominance issues between the two biggest in terms of market shares undertakings if these hold collectively no less than 75%, with the exception of the Czech NRA who examined also cases where the undertakings held approximately 60%<sup>428</sup>. As pointed out by Hou<sup>429</sup>, in cases where the concentration ratios are less than 75%, a third largest undertaking with similar size can always be found. In the three notifications where collective SMP is found by the NRAs<sup>430</sup> and approved by the Commission, the two-undertaking concentration ratios were 84.1%<sup>431</sup>, 94%<sup>432</sup> and 100%<sup>433</sup>.

### **3.2.1.3 Indispensable symmetries**

US antitrust apply the Herfindahl-Hirschmann index (HHI) for measuring market concentration. The HHI is calculated by summing the squares of the individual market shares of all participants and, then, market concentrations are categorised into “unconcentrated”, “moderately concentrated” and “highly concentrated”, depending on

---

<sup>428</sup> CZ/2006/0448 and 451.

<sup>429</sup> Hou, L., *ibid*, 286.

<sup>430</sup> In IT/2006/424, the Italian NRA does not disclose market percentages.

<sup>431</sup> ES/2005/0330.

<sup>432</sup> IE/2004/121.

<sup>433</sup> MT/2007/0563.

their ranking on the index<sup>434</sup>. *Airtours* was the first Commission judgement where the HHI was applied<sup>435</sup>. Markets in which the HHI is between 1000 and 1800 points are usually considered to be moderately concentrated while those in which the HHI is in excess of 1800 are considered to be concentrated. However, the application of the HHI has been debated by economists on the grounds that it is a blunt tool for identifying size asymmetries amongst the leading firms and is misleading when attempting to identify the likelihood of collective dominance<sup>436</sup>.

Also, this rule cannot be easily adapted to electronic communications markets, given the fact that the HHIs in all the notifications involving collective SMP analysis are much higher than 1800. Since the very first notification UK/2003/001 involving the market for access and call origination on public mobile telephone networks, the Commission placed little value on HHI, by taking the view that the fact that the UK had a lower HHI score than markets in other member states is not in itself an indication of its propensity towards or away from collective dominance<sup>437</sup>.

However, the allocation of market share between the firms has a role to play in the establishment of joint dominance since the symmetry of market positions must be taken into account<sup>438</sup>. Similarity in market shares reduces the incentive to compete, because of the impression of fairness created by the balance in market shares, which decreases the likelihood of the parties competing for higher market shares<sup>439</sup>.

In *Kali & Salz* the CJEU noted that a collective market share of 60% subdivided in percentages of 37% and 23% “cannot of itself point conclusively to the existence of a collective dominant position”<sup>440</sup>. Asymmetric market positions establish competitive price equilibrium, since smaller operators struggling for customers with aggressive pricing and marketing may expose operators with bigger market shares to substantial

---

<sup>434</sup> Etter, B., *ibid.*, 134.

<sup>435</sup> Para. 139.

<sup>436</sup> Davies, Olzac, Coles, H., *Tacit Collusion, Firm Asymmetries and Numbers: Evidence from EC Merger Cases*, February 2010, <http://competitionpolicy.ac.uk/documents/107435/107587/ccp07-7.pdf>.

<sup>437</sup> In CZ/2006/451 on wholesale trunk segments of leased lines, the HHI was around 2525, but it was considered to indicate low market concentration.

<sup>438</sup> In *Airtours/First Choice* the Commission took into account the increase in symmetry of market positions among the leading suppliers with respect to vertical integration, which would be caused by the merger.

<sup>439</sup> Navarro and others, *ibid.*, 227.

<sup>440</sup> Para. 226 of the judgement.

competition<sup>441</sup>. That was considered to be the case in the German mobile market in the first years of the previous decade, where the two smaller operators and especially the smallest Viag Interkom, who was trying to make up for the relative late market entry, were found to put considerable competitive pressure on the two major players (T-Mobile and Vodafone), each holding approximately 40% of the mobile market<sup>442</sup>. The similar market positions held by GO and Melita led MCA to analyze in MT/2012/1375 whether they might together hold a position of joint dominance in the wholesale broadband access market, albeit SMP was not found to exist as a result of signs of competition (improved in terms of prices, speeds and download limits and increased product differentiation with the provision of a vast array of bundles). The asymmetry in market positions was considered focal by the Slovenian NRA in determining lack of joint dominance on the national market for mobile access and call origination<sup>443</sup>, although the NRA had originally concluded in favour of the existence of collective dominance between the two biggest mobile operators<sup>444</sup>. Asymmetry in market shares has been regarded a predominant factor in dismissing concerns of joint dominance also in merger cases in the electronic communications sector<sup>445</sup>.

On the other hand, the French mobile operators Orange, SFR and Bouygues Telecom were fined in 2007 by the French competition authority for having engaged in collusion by exchanging confidential information for several years and for market partitioning practices. Bouygues was a very small player compared to the other two operators, which was struggling to survive against the two major players; it, therefore, decided that, if modest and growing, market share gave it sufficient relief from competitive pressures<sup>446</sup>.

---

<sup>441</sup> Economic theory suggests that when output is increased and marginal costs are rising, the lowest price is preferred by the firm with the smallest market share, whereas when marginal costs fall with higher output, the lowest price is preferred by the firm with the largest market share, which has an incentive to expand and take full advantage of the low costs associated with high outputs. Scherer, F. M., Ross, D., *Industrial Market Structure and Economic Performance*, 1990, 240.

<sup>442</sup> Groebel, A., *Why Germany Does Not Regulate Wireless Carriers – Under which Circumstances should Wireless Carriers be Regulated?*, [2002] CTLR 155.

<sup>443</sup> Case SI/2009/0913.

<sup>444</sup> Case SI/2008/0806.

<sup>445</sup> E.g. Case No. IV/M. 570, *TBT/BT/Teledanmark/Telenor*, 24.4.1995. Case No. COMP/M. 1943, *Telefonica/Endemol*, 11.7.2000. Case No. COMP/M. 2851, *Intracom/Siemens/STI*, 10.2.2003 Case No. COMP/M.2016, *France Telecom/Orange*, 11.8.2000.

<sup>446</sup> Sutherland, E., *Collusion among Mobile Network Operators in France*, [2007] CTLR, 91-93.

Also, in its notification IE/2004/0121, the Irish NRA established collective dominance by the two major network operators in the market for mobile access and call origination, despite the lack of symmetry in their market shares (54% Vodafone, 40% O2) on the basis that their absolute size (94% in terms of subscribers and 97% in terms of revenue) gave them a strong enough incentive to coordinate<sup>447</sup>. The Commission did not challenge this finding, but pointed out the significance of closely monitoring the third competitor who had recently entered the market and, although incapable of exercising competitive pressure at this stage, could develop in the near future into a credible alternative access provider<sup>448</sup>.

Stability of market shares is also considered conducive to collective dominance. Non-stable market shares instead imply competition and accordingly can immediately remove concern of tacit collusion<sup>449</sup>. The declining, though symmetrical, market shares of the four major mobile operators in Denmark over the period 2004-2007 has been crucial in the NRA's finding against collective dominance, despite the existence of entry barriers<sup>450</sup>. Also, volatility of market shares was, together with the lack of significant entry barriers, the key points in determining lack of SMP by the Estonian NRA in the duopoly for transit services<sup>451</sup>.

In addition, economists link the symmetry of market shares with the similarity of cost structures, which was also included in the original list of Annex II of the Framework Directive as a separate factor inductive to collective dominance<sup>452</sup>. Similarity in cost structures entails a strong possibility of the undertakings having similar points of view on the prices that would like to see prevailing on the market. For example, for the high cost firms, agreeing to reduce output substantially would tantamount to disarming, unlike low cost firms<sup>453</sup>. In case SK/2006/0042, the Commission observed that the existence of significantly different profitability margins between T-Mobile and Orange

---

<sup>447</sup> In other cases, the possibility of tacit collusion was not examined at all in the event of asymmetric market shares (e.g. notification UK/2008/0787 on the submarkets for terminating segments of leased lines in the UK).

<sup>448</sup> EC's comments pursuant to Article 7(3) of Directive 2002/21/EC – SG Greffe(2005)D/200269, p. 7.

<sup>449</sup> Hou, L., *ibid.*, 283.

<sup>450</sup> EC's comments on notification DK/2008/0863, SG-Greffe (2009) D/633, p. 3.

<sup>451</sup> Case EE/2007/0670.

<sup>452</sup> That was the case in *Gencor/Lonrho* (Case IV/M 619 [1997] OJ L11/30), where the Commission considered that similar cost structures reduce the incentive to compete particularly on mature markets with low technological innovation.

<sup>453</sup> Scherer, F. M., Ross, D., *ibid.*, 242.

indicated the lack of parallel interests in preventing MVNO entry, despite the lack of any MVNO access agreement on the Slovakian mobile market<sup>454</sup>.

It follows from the foregoing, that NRAs and the Commission consider that concerns of tacit collusion in oligopolistic markets may only arise in the context of symmetrical duopolies (never in markets involving more than three players) with combined market shares in excess of 80%. Also, undertakings with market shares lower than approximately 25% will not be considered as capable of participating in tacit collusion. This accords also with the presumption of the old regulatory framework that only undertakings with market shares in excess of 25% may be held to enjoy SMP<sup>455</sup>.

### **3.2.2. Transparency and retaliation**

#### **3.2.2.1 Transparency**

An adequate degree of market transparency is considered determinative for the establishment of collective dominance, so that firms are able to monitor other firms' conducts and detect deviations<sup>456</sup>. High market transparency depends on the ability of firms to observe transaction prices and levels of sales of competitors as well as on the degree of concentration of the market, since in concentrated, highly transparent markets deviations from tacit agreements are easily identifiable<sup>457</sup>. In *Airtours*, the Commission based its transparency arguments on capacity rather than pricing, but contrary to the Commission's contention, the GC concluded that the fact that the major tour operators negotiated between themselves to acquire or supply capacity or to arrange seat or slot swaps did not provide for a sufficient degree of transparency when decisions were taken<sup>458</sup>.

---

<sup>454</sup> Similarly, in Case PL/2008/0756, the Polish NRA noted cost differences between 24% and 700%, also due to tax reasons, which pointed against the presence of collective dominance in the wholesale market for mobile access and call origination.

<sup>455</sup> Refer to section 1.2.1.

<sup>456</sup> Stroux, S., *Collective Dominance under the Merger Regulation: A Serious Evolutionary Reprimand for the Commission*, [2002] ELRev, 740.

<sup>457</sup> Kokkoris, I., *ibid.*, 436.

<sup>458</sup> Par. 179-181 of the judgement.

In that respect, information sharing, which may have pro-competitive effects on highly competitive markets with atomised sources of supply, becomes a competition law problem in oligopolistic highly concentrated markets<sup>459</sup>. The GC has held that on a highly concentrated market on which competition was already reduced and the exchange of information facilitated, frequent exchange of precise information identifying individual sales by competitors is likely to impair substantially the competition between traders in the relevant market<sup>460</sup>.

Transparency may be established through multi-market contact, not necessarily limited to the market under scrutiny. The parties may be found to explicitly co-operate in other markets, whether neighbouring or not, which may have resulted in the establishment of solid channels of communication between them, leaving room for future co-ordination<sup>461</sup>.

In *IMPALA*, the GC illustrated transparency by reference to

‘close alignment of prices over a long period, especially if they are above a competitive level, [which] together with other factors typical of a collective dominant position, might, in the absence of an alternative reasonable explanation, suffice to demonstrate the existence of a collective dominant position, even where there is no firm direct evidence of strong market transparency, as such transparency may be presumed in such circumstances’<sup>462</sup>,

And that

‘discounts are not capable of really affecting the transparency of the market as regards prices resulting from, in particular, public list prices, since it is stated [by the Commission] that “[i]f a significant deviation from pricing policies was

---

<sup>459</sup> Vollebregt, E., *EC Competition Law Aspects of Peer-to-Peer Networking*, [2002] CTLR, 64.

<sup>460</sup> Case T-35/92, *John Deere vs Commission*, par. 51.

<sup>461</sup> In a wide range of circumstances, multimarket contact relaxes the incentive constraints that limit the extent of collusion. Indeed, the literature has found a significant multimarket effect, although the sign of this effect has tended to vary across industries. The effect of multimarket contact on the price or profits of any one industry depends greatly on the set of markets over which the firms have contact and on the characteristics of active (and potentially active) firms. E.g. when firms are identical and markets differ, prices and profits may rise in some markets, but fall in others, as a result of multimarket contact. Bernheim, D., Whinston, M., *Multimarket Contact and Collusive Behavior*, [1990] Rand Journal of Economics, 22.

<sup>462</sup> Case T-464/04, *IMPALA v. Commission*, judgement of 13.7.2006, par. 252.

being implemented by the majors through the grant of discounts, this deviation would have been reflected in their average net prices’<sup>463</sup>

And

‘the differences in the ranges of discounts over time could be the result of differences in performance and do not preclude the discounts being based on a known set of rules’<sup>464</sup>.

The CJEU upheld the finding of the GC that the condition relating to market transparency, might, in certain circumstances and in the absence of an alternative explanation, suffice to demonstrate the existence of a dominant position, as opposed to the creation of such a position, without its being necessary positively to establish market transparency and indicated that competition authorities should avoid mechanical approach to the *Airtours* criteria based on the separate verification of each criterion in isolation, while disregarding the general economic mechanism of potential tacit coordination<sup>465</sup>. The Court did not take a position on the whether the GC was correct to infer transparency of discounts from their impact on average net prices and dismiss the relevance of complex pricing structures and price variations when assessing transparency, but it held that

‘the [General Court] was content to rely, in paragraphs 427 to 429 of the judgment under appeal, on unsupported assertions relating to a hypothetical industry professional ...[and] disregarded the fact that the burden of proof was on Impala in relation to the purported qualities of such a hypothetical ‘industry professional’ ... [thus] misconstruing the principles which should have guided its analysis of the arguments raised before it concerning market transparency in the context of an allegation of a collective dominant position, the Court of First Instance committed an error of law’<sup>466</sup>.

Market transparency is affected by homogeneity of services, which simplifies pricing decisions and renders (explicit and tacit) collusion easier as it increases the likelihood

---

<sup>463</sup> *Ibid.*, par. 309 of the judgement.

<sup>464</sup> *Ibid.*, par. 420 of the judgement.

<sup>465</sup> Case C-413/06, *Bertelsmann and Sony Corp. vs Impala*, Judgement of the Court of 10.07.2008, Par. 123-125. In support of this interpretation, Van Rompuy B., *Implications for the Standard of Proof in EC Merger Proceedings: Bertelsmann and Sony Corp. of America v. Impala (C-413/06 P) CJEU*, [2008] 10, *European Competition Law Review*, 611.

<sup>466</sup> *Ibid.*, par. 131-133.



of the same reaction towards the market. With perfect homogeneity, there remains only one dimension along which rivalrous actions and counteractions can take place: price<sup>467</sup>. Hence, on examining markets for the purposes of establishing prospective collusive behavior, the relevant issue should be whether the nature and the pricing of the product are differentiated in such a way that co-ordinated behaviour is inhibited<sup>468</sup>.

Indeed, the review of Article 7 notifications involving joint dominance issues indicates that, when examining price-oriented coordination, the NRAs always set their emphasis on market transparency, in other words whether the markets in question is transparent enough for undertakings concerned to monitor other's pricing behaviors. In this context it is considered that, an unstable price, *i.e.* steadily decreasing prices or a fluctuating price or different tariff packages, is considered to make it difficult to monitor the other undertakings' behaviors<sup>469</sup>. For example, in IE/2004/0121 the Irish NRA acknowledged that the apparent complexity of these tariffs can work against the establishment of a consensus position even on a market where all the operators offer broadly the same portfolio services in their retail clusters.

The Commission emphasised the importance of market transparency in *Nestle* and in *Gencor*, where it considered actions such as publication of price lists and production and sales statistics as enhancing market transparency. Indeed, published price<sup>470</sup> or sometimes information disclosed in the negotiation with customers<sup>471</sup> were found by NRAs to enhance transparency. It is noted that regulatory obligations, like the obligation to interconnect and transparency obligations including the publication of reference offers provided in Article 9 of the Access Directive, as well as market practices, like auctions for spectrum allocation enhance market transparency. Auctions for licenses are considered to induce credible signalling for collusion in the post-entry

---

<sup>467</sup> Homogeneity of services was included in the original list of factors of Annex II, but was omitted from the list of the revised Annex II. Hou (*ibid*, 289) argued that the appraisal of homogeneity in practice was less meaningful to collective SMP assessment, since "old" technologies are still dominating the markets and thus market players usually offer homogeneous products in electronic communications markets, which can be observed in almost all of the Commission decisions.

<sup>468</sup> Refer to Scherer, F. M., Ross, D., *ibid.*, 279 and Christensen, P., Rabassa, V., *ibid.*, 231.

<sup>469</sup> DE/2007/0627, DK/2005/0243, CZ/2006/0405, UK/2003/001.

<sup>470</sup> IE/2004/0121.

<sup>471</sup> SL/2008/0806.

stage<sup>472</sup>, particularly since the same major players are present in most European markets<sup>473</sup>.

Also, the obligation to interconnect creates in itself communication routes between the already limited number of market players<sup>474</sup>. Transparency may be created through such agreements as well as from memberships to international associations and fora, like the GSM and UMTS Association<sup>475</sup>. Also, it may encompass less direct communication channels between market players, such as the use of the same suppliers and/or customers in access agreements<sup>476</sup>. It follows from the foregoing that, as a result of the various forms of communication between market players, establishing transparency in electronic communications markets should not be that difficult. Indeed,

---

<sup>472</sup> Gruber, H., *Spectrum limits and competition in mobile markets: the role of license fees*, [2001] Telecommunications Policy, 67.

<sup>473</sup> That was claimed to be the case of the obligatory spot market in the California electricity market, which was accounted for a high degree of transparency, which allowed for increased oligopolistic behaviour among the few players and an artificial inflation of the price of electricity by approximately 900% in one year Manoussakis, S., *Liberalisation of the EU Electricity Market: Enough to Power Real Progress?*, [2009] 232. Technological advances have also led to new types of commodities being exchanged in the marketplace: for example, cell phone minutes and bandwidth (refer to <http://www.aaii.com/journal/article/investing-in-commodities>). However, interest in bandwidth reservation schemes have not caught on for a number of reasons, notably lack of interest on the part of the bandwidth providers. This, in turn, was partially caused by the lack of an efficient way of charging for bandwidth. Refer to Turner, D., Prevelakis, V., Keromytis, A., *A market-based bandwidth charging Framework*, ACM Transactions on Internet Technology, Vol. 10, issue 1, Feb. 2010.

<sup>474</sup> In IE/2004/121, the Irish NRA recognised the existence of considerable links between the electronic communications undertakings in the form of agreements of access, interconnection and infrastructure sharing, or through “millions of customer and a number of ‘churning’ customers on the demand side every month”.

<sup>475</sup> The UMTS forum was established in 1996 and is intended to draw together network operators, regulators and manufacturers of network infrastructure and terminal equipment with an interest in mobile broadband. The UMTS Forum participates in the work of the ITU, ETSI, 3GPP and CEPT as well as other technical and commercial organisations, voices the concerns of its members to regulators and supports the interests of its membership with a range of studies, reports and other outputs (on market trends, mobile broadband services and applications, spectrum & regulation, technology & implementation issues (<http://www.umts-forum.org/content/view/2885/203>)). Participation in such fora increases market transparency since it allows the coming together of market players, the exchange of ideas and the establishment of common practices, like e.g. in international roaming agreements.

<sup>476</sup> Although considered competitive due to the existence of significant countervailing buyer power, the market for the supply of mobile handsets and terminal equipment is also concentrated on a global basis, and the operators around the world use the same supplier. Refer to Case No COMP/M.4297, *Nokia/Siemens*, 13.11.2006, Case No COMP/M.4214, *Alcatel/Lucent Technologies*, 24.7.2006.

the majority of cases that dismissed concerns of collective dominance did it on grounds other than the lack of transparency<sup>477</sup>.

However, the NRAs of the ten out of the twelve member-states that conducted market assessments of their respective wholesale national roaming markets concluded against market transparency as a result of the individual rebates given to alliance partners in the different member states<sup>478</sup>. It is noted that the findings of the GC in *Impala* with respect to transparency appear not to have been taken into account by the NRAs in the examination of international roaming markets, at least in the cases notified after the issue of the GC's decision<sup>479</sup>. Notably, if a finding of a common policy on excessive roaming rates, given the existence of other factors characteristic of a collective dominant position, might have sufficed -under the specific circumstances of the roaming market and in the absence of an alternative explanation- to demonstrate the existence of a dominant position, without them being necessarily required to positively establish market transparency<sup>480</sup>. This issue is discussed in detail in the following chapter.

### 3.2.2.2 Retaliation mechanisms

Even if oligopolists have an incentive to co-ordinate their behaviour, tacit co-ordination may not occur, because of the presence or absence of other factors that affect market performance, like the existence of retaliation mechanisms<sup>481</sup>. Collusion is usually sustainable when there are effective mechanisms in place threatening worse results for the “cheater”, who decided to deviate from the collusive equilibrium. In

---

<sup>477</sup> In DE/2007/0627, the German NRA considered that there was a number of factors capable of supporting a finding of collective dominance in the market on mobile access and call origination, but, concluded against it as a result of lack of transparency.

<sup>478</sup> FI/2005/304, DK/2006/419, SI/2006/434, SE/2006/496, PL/2006/0517, AT/2006/466, ES/2006/460, IE/2006/477 and GR/2006/558, EE/2007/629.

<sup>479</sup> Judgment of the Court of First Instance of 13.07.2006, Case T-464/04.

<sup>480</sup> In comparison with the Court's finding in par. 252 of the judgment. It is reminded that the CJEU upheld the relevant finding of the GC and indicated that competition authorities should avoid mechanical approach to the *Airtours* criteria based on the separate verification of each criterion in isolation, while disregarding the general economic mechanism of potential tacit coordination (par. 123-125).

<sup>481</sup> Hrawick, E., *Clipping the Commission's Wings: The GC's Airtours Ruling*, [2001/2002]4, ULR 95.

such case, it remains rational for the firms involved not to compete in an active way, even when there is no commitment from competitors to do the same<sup>482</sup>.

In *Airtours*, the Commission denied the necessity of a retaliatory mechanism<sup>483</sup>; the General Court did not contest the argument as such, but argued that deterrents must exist that provide incentives not to cheat<sup>484</sup>. Such deterrents may be found in markets other than the market under scrutiny, since multi-market contacts may be exploited as a retaliatory mechanism in case there is deviation from the collusive outcome<sup>485</sup>. In *Impala* both the GC and the CJEU confirmed the indispensability of retaliatory mechanisms for the establishment of collective dominance<sup>486</sup>. The GC had held, with the approval of the CJEU, that proof of a firm's threat of use or effective use of retaliatory mechanisms is not necessary and that the *Airtours* criterion can be established not only by means of direct evidence but also indirectly<sup>487</sup>.

Not all market structures provide the necessary ground for the development of credible retaliatory mechanisms, despite high concentration and transparency. In fact, Bishop and Walker argue that, coordination on a long term variable, such as introduction of new capacity or new investment is less likely to be adopted and sustained since the retaliation mechanism is not as effective and credible as in the case where coordination is on a short term variable such as price or output<sup>488</sup>. In access markets in the electronic communications sector quantity commitments are essential features of each firm's business plan, because of high sunk costs incurred and the long term of the investment,

---

<sup>482</sup> The inability to establish the existence of credible retaliation mechanisms, as a result of the participation of operators to different pan-European groups was determinative for the finding against concerns of joint dominance in the wholesale international roaming markets, IT/2006/393, AT/2006/466, ES/2006/460, IE/2006/477 and GR/2006/558

<sup>483</sup> Case M1524, *Aitours/FirstChoice*, par. 55.

<sup>484</sup> Par. 192-193 of the judgement.

<sup>485</sup> Kokkoris, I., *ibid.* at footnote 60, 432.

<sup>486</sup> In the *CJEU Impala judgement*, at par. 126, the CJEU stated that the analysis of the sustainability of tacitly collusive conduct needs "...to take into account the monitoring mechanisms that may be available to participants in the alleged tacit coordination in order to ascertain whether, as a result of those mechanisms, they are in a position to be aware, sufficiently precisely and quickly, of the way in which the market conduct of each of the other participants in that coordination is evolving" (also at par. 242.

<sup>487</sup> *Ibid.*, at par. 123-124. Mezzanote, F., *Tacit Collusion as Economic Links in Article 82 EC. Revisited*, [2009] ECLR, 136-141 argues that although the court laid down guiding principles as to how this theory of indirect proof should function, this issue remains unclear and merits further discussion.

<sup>488</sup> Bishop, S., Walker, M., *The economics of EC Competition Law: Concepts, Application and Measurement*, Sweet & Maxwell, 2002, 286. Co-ordination on capacity is generally difficult to achieve, because decisions on capacity restrictions are said to be more complex and difficult to take, let alone in a co-ordinated fashion, Caffara, Ch., Kuhn, K., *ibid.* 358.

whereas output in the services markets is strongly dependent on their capacity. The existence of over-capacity is said to weaken the strength of future retaliations<sup>489</sup>.

Currently, there is excess capacity as a result of spectrum dividend<sup>490</sup>, whereas after the 2009 revision package spectrum rights are tradable<sup>491</sup>, which facilitates the use of excess capacity by alternative technologies and NGA networks. Also, excess capacity exists as a result of dark fiber, notably of fiber left idle for many years, particularly after the bust of the dot.com boom in 2000, when network operators sank a lot of money into infrastructure equipment and fiber, much of it remaining unused for over a decade<sup>492</sup>: lighting up the dark fiber has been suggested as a solution for the continuing growth of internet broadband, prompting companies to invest in upgraded optical equipment<sup>493</sup>. This increases the possibility of a finding against the existence of credible retaliation mechanisms in wireless markets and broadband.

Under notification MT/2006/0443 the Maltese NRA pleaded in favour of the existence of retaliation mechanisms in the market for mobile access and call origination on the grounds of the disposal of over-capacity by Vodafone and Go-Mobile, which was claimed to permit the development of MVNOs. The Commission challenged the credibility of such mechanism due to the time involved in the start of operation of MVNO, which may also end up in mutual profit loss for the operators, although it agreed on the existence of other retaliation mechanisms through price-cutting.

The Spanish NRA established collective dominance in the market for mobile access (wholesale level) consisting in the denial of wholesale access to third parties and on the basis of alignment of commercial strategies at retail, because of the existence of retaliation mechanisms at retail level<sup>494</sup>. The Spanish NRA also identified retaliation mechanism at wholesale level consisting in MVNO access, which could be realised

---

<sup>489</sup> Easter, C., Hughes, M., *ibid.*, 192. Over-capacity reduces the likelihood of co-ordination, because it is in the interests of all parties disposing of excess capacity to sell it even at a reduced price, thus making profit through increases in the volume of sales as opposed to price increases, Case IV/M.358 *Pilkington-Techint/SIV* [1994] OJ L 158/24.

<sup>490</sup> Refer to section 1.1.2.2. Spectrum dividend is the unused spectrum granted to broadcasters, which is valuable to the providers of wireless services, who are expected to reinforce competition in the broadband market.

<sup>491</sup> Refer to section 2.2.2.4.

<sup>492</sup> <http://mwrf.com/content/optical-telecommunications-gear-recovers-dot-com-bust>.

<sup>493</sup> <http://www.pcpro.co.uk/news/interviews/376357/lighting-up-dark-fibre-could-improve-uk-broadband>

<sup>494</sup> Case ES2005/0330.

because of the sufficiency of spectrum enabling all operators to adapt quickly the capacity of the network to the evolution of the traffic. The Commission expressed concerns on the immediate effect of such mechanism as a result of the time-consuming process of negotiating and signing access contracts and invited the NRA to provide additional supporting evidence on the credibility of such mechanism in future notifications. But the Commission accepted the existence of retaliatory mechanisms at retail level through 'price wars' consisting in the deviation from the principles of the common commercial strategy.

The lack of transparency was also the reason pleaded by the NRAs who undertook assessments of the wholesale international roaming, which was considered difficult to be established as a result of the operators' participation in different European alliances for the provision of roaming services to European travellers. Like in the case of transparency, it may be argued that a finding of a common policy on excessive roaming rates, given the existence of other factors characteristic of a collective dominant position, might have sufficed -under the specific circumstances of the roaming market and in the absence of an alternative explanation- to demonstrate the existence of a dominant position, without them being necessarily required to positively establish retaliation mechanisms. This issue is discussed in detail in the following chapter.

### **3.2.3. Other factors**

#### **3.2.3.1. Barriers to entry**

The significance of barriers to entry and/or expansion is high for the establishment of anti-competitive effects in oligopolistic markets. In fact, it is claimed that price-fixing cartels can be stable if they depend less on output restriction than on discouraging entry or expansion by existing firms, because the added output of new entrants may drive down price immediately<sup>495</sup>.

---

<sup>495</sup> Scherer, F.M., Ross, D., *ibid.*, 245-246.

Entry barriers prevent firms from entering markets and competing and may take various forms, like legal restrictions, economic barriers linked to production or proprietary technology, branding, scale or scope economies. The level of entry barriers to the market is of concern to dominant undertakings, because ease of entry implies that their share of industry/market profits decline on the entry of new competitors<sup>496</sup>. The significance of potential market competition for the determination of dominance has lead commentators to express the view that for firms with large market shares, the presence and nature of barriers to entry is a much more useful guide to antitrust analysis than the market shares themselves<sup>497</sup>.

In electronic communications, high barriers to entry are said to appear in wholesale markets for the provision of mobile and wireless services, which require spectrum allocation and associated licensing requirements or other network markets as a result of high investment requirements<sup>498</sup>. However, economic theory argues that the higher fixed costs are, relative to total costs, the less prone an industry is to collusive behaviour, because firms in high-cost industries seem to exercise extraordinary restraint in their pricing actions<sup>499</sup>. In addition, economists have challenged the level at which spectrum may limit market development particularly in the light of technological advances enabling better and more use of spectrum availability and have taken the view that licensing requirements are no more than artificial barriers to entry in the sense that the market would not sustain more than few players. They support this view by reference to the example of digital markets, which start with more players in the first stages of their development, but tend to lose market players gradually, mainly through merger processes<sup>500</sup>.

---

<sup>496</sup> Arowolo, O., *ibid.*, 249-253.

<sup>497</sup> *Ibid.* 252.

<sup>498</sup> Under Articles 3, 6 and 7 of the Authorisation Directive, as amended by Directive 140/2009/EC, the provision of electronic communication services requiring the use of radio frequencies is subject to general authorisation, unless member states give reasons explaining the need to give individual rights of use and follow the procedures set out in the Authorisation and the Framework Directive for the allocation of such rights.

<sup>499</sup> Scherer, F. M., Ross, D., *ibid.*, 289f. Nonetheless, the same authors refer to examples of industries that have been successful in minimising rivalrous pricing despite high fixed and low variable costs and depressed demand and this is attributed to the presence or absence of other conditions conducive to cooperative pricing.

<sup>500</sup> Gruber, H., *ibid.*, 59-70.

Yet, the fees paid in the frame of licensing requirements for electronic communications may comprise inducement for collusive behaviour: the government typically determines the number of licenses, hence, sets exogenously the number of firms in the industry<sup>501</sup>. But the endogenously determined license fee might become incompatible with the exogenously set market structure if, for instance, firms are paying very high license fees. In oligopolistic markets, there would be two options: exit for some firms or collusion<sup>502</sup>. This is also in line with the scepticism that has grown about the true significance of entry barriers in all industry sectors, as some scholars have argued that the real obstacle is not the cost of entry, but the cost of exit (risk of non-recovery of investment cost)<sup>503</sup>.

Particular emphasis should be placed on barriers to expansion. High investment costs create impediments to the market's expansion, either in terms of the number of players or in terms of the market's growth on the supply side. In the absence of such barriers, collusive firms will not be able to exert market power, because if they raise prices, output will be lost to the non-collusive firms, which will expand output to reap the higher profits resulting from the increased prices<sup>504</sup>. For example, the coverage of the various networks can also limit the ability of smaller players to compete, which is particularly relevant to new entrants, if they have not yet rolled out their networks<sup>505</sup>.

Spectrum trading and liberalisation can lower barriers both to entry and expansion and permit new entry and was thus suggested as the remedy to potential anti-competitive practices to prevent market entry. Studies commissioned for European bodies showed that, if change of use is not possible, the risk of collusion is higher in spectrum markets, since it may be profitable to collude in order to exclude entrants or block expansion by rivals<sup>506</sup>. If change of use is possible, blocking entry by acquiring spectrum becomes impractical, because liberalisation of spectrum use creates new opportunities for entry by acquiring spectrum outside traditional patterns of use. In

---

<sup>501</sup> The government sets also the method of award, i.e. highest bid or beauty contest; for the implications of such choice on competition refer to section 2.2.2.4.

<sup>502</sup> *Ibid.*, 66-67.

<sup>503</sup> Weatherill, S., Beaumont, P., *ibid.*, 739.

<sup>504</sup> Kokkoris, I., *ibid.*, 429.

<sup>505</sup> Easter, C., Hughes, M., *Collusion and Co-operation in the Mobile Sector*, [2001] CTLR, 192.

<sup>506</sup> Final report for the European Commission: Study on conditions and options in introducing secondary trading of radio spectrum in the European Community, May 2004, par. 69.



addition, there is greater opportunity for dislocating innovation, which can generate substantial benefits for customers in the long run<sup>507</sup>.

Hence, through Decision 2009/766/EC of the Radiospectrum Committee, the EU has called for the variation of licenses of GSM operators to permit use of licensed frequencies both for GSM and UMTS<sup>508</sup>. This results in the lowering of barriers to entry and expansion on the mobile market, thus rendering collusion between operators less likely.

It is reminded, though, that, in the process of market assessments for the purposes of SMP regulation, the existence of barriers to entry is examined in the context of market definition, since they comprise one of the three criteria set out by the Recommendation for the definition of markets susceptible of *ex ante* regulation. This means that, under the current framework, NRAs should take the existence of barriers for granted in the markets under examination and that these should not re-appear in the list of factors appraised for the finding of collective dominance.

### **3.2.3.2. Pressure exercised by third parties**

The Second Report on market reviews made particular reference to fringe competitors, including potential competition, as a factor affecting the finding of joint SMP in the

---

<sup>507</sup> *Ibid.*, par. 68. In the UK, there has been considerable debate on whether Ofcom should proceed with the re-farming of unused 900 MHz spectrum held by O2 and Vodafone to existing or new entrants for the deployment of 3G mobile services (Ofcom Consultation document, *Application of Spectrum Liberalisation and Trading to the Mobile Sector*, 20.09.2007). Finally, Ofcom implemented amendments to all concession contracts to vary the licenses to permit 3G services over 900 MHz and 1800 MHz bands and make the relevant licenses tradable (Ofcom, *Notice of proposed variation of 900 MHz and 1800 MHz Wireless Telegraphy Act licenses*, 28.10.2010 and *Statement on variation of 900 MHz and 1800 MHz Wireless Telegraphy Act licenses*, 06.1.2011). More recently, Ofcom allowed Everything Everywhere, the company that resulted from the merger of T-Mobile and Orange in the UK, to offer 4G services through its unused 2G spectrum rights, before the spectrum auction for 4G licenses (Ofcom, *Decision to vary Everything Everywhere's 1800 MHz spectrum licenses to allow use of LTE and Wimax technologies*, 21.08.2012). Ofcom was more concerned with the release of additional spectrum in the 800MHz and 2.6GHz bands which will enable other operators to launch competing LTE services during the course of 2013, despite the first-mover advantage granted to Everything Everywhere, which it considered "non-enduring".

<sup>508</sup> On 5.11.2012, the European Commission has decided to make it mandatory for Member States to open UMTS spectrum to 4G technologies by 30 June 2014 at the latest, by adding another 120 MHz to the radio spectrum portfolio for 4G technologies around the 2 GHz band and laid down harmonised technical conditions to allow coexistence between different technologies. On this basis the EU will enjoy up to twice the amount of spectrum for high speed wireless broadband as in the United States, namely around 1000 MHz: [http://europa.eu/rapid/press-release\\_IP-12-1170\\_en.htm](http://europa.eu/rapid/press-release_IP-12-1170_en.htm).

wholesale market of mobile access and call origination. It is reminded from the analysis in section 3.2.1 that the presence of a third operator was determinative against the finding of SMP between the two major players. For example, reference has already been made to the Maltese re-notification on the market for wholesale broadband access, where MCA decided that there was no collective SMP mainly by the reason of the entry of a newcomer who, despite the low market share at the time, had quickly established a wireless broadband network covering the whole territory of Malta with new wireless technology, capable of exercising competitive pressure on the two fixed broadband operators, who were originally considered capable of establishing collective SMP<sup>509</sup>. Further to the competitive fringe, the potential appearance of new entrants in the market also affects the stability of market shares of existing players.

There may be undertakings, which have already fully duplicated the incumbents' infrastructure and nevertheless have not yet provided services to third parties (captive sales), have ability and incentive to serve third parties (merchant sales), provided that the formation of collective SMP in the merchant markets leads to monopolistic profits<sup>510</sup>. That was said to be the case in EE/2007/670, CZ/2006/448 and SI/2006/0362, where theories of collective SMP between existing operators collapsed as a result of other operators, who, although they had not yet actually provided services to third parties could, however, easily enter this market if market prices for the services were high enough.

Also, the presence of strong buyer power may have a negative impact on the sustainability of tacit collusion. Customers negotiating contracts of a significant value or the limited number of buyers themselves (concentration of demand) may act as an incentive to competitive behavior, especially in markets with few players, where there is need to attract that particular customer<sup>511</sup>. On the other hand, a fragmented buyer

---

<sup>509</sup> MT/2008/0803, following the expression of serious doubts by the Commission on the finding of joint dominance in the market under MT/2007/0563.

<sup>510</sup> Hou, L., *The assessment of collective SMP: Lessons learned from the first market review*, December 1<sup>st</sup>, 2008, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1309684](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1309684), at p. 8.

<sup>511</sup> In *Enso/Stora*, Case IV/M.1225, [1999] OJ L254/9, the Commission regarded the countervailing buying power of customers in the liquid packaging board market arising out of a peculiar market structure with very few producers and very few buyers as the decisive factor to clear the merger. *Airtours* has also placed significant weight on this factor.

side makes cheating less likely as detection is easier and any deviator would become known to more market players<sup>512</sup>.

Kokkoris and Day<sup>513</sup> summarise the main factors that influence buyer power in i) the dependence of supplier on a buyer or buyer group, in case of large buyers or limited number of buyers, ii) the buyers' incentive to exploit their power, in case they face no repercussions, which may be achieved through collusion with suppliers. It is suggested that if a market has a strong buyer, this buyer will be in a better relative position to collude with suppliers to exclude a rival buyer, which may be especially true when the buyers sell directly to end customers. Also, iii) in negotiations, which is especially true in individually negotiated discounts, bearing in mind, though, that one buyer's power may influence the buyer power of other buyers in the market. Nonetheless, one buyer's successful negotiations to obtain a discount may increase the price to other buyers, as suppliers may try to recoup lost margins from giving one buyer a discount by increasing prices to other buyers. In addition, the reduction in retail prices of the powerful buyer may have the effect of forcing weaker rivals to exit the market or reduce variety, which will end up in reducing competition or choice for consumers<sup>514</sup>. The stronger buyer will grow at the expense of the weaker rivals and can potentially gain a large share of the market<sup>515</sup>.

In MCI WorldCom/Sprint<sup>516</sup> the countervailing power of customers for global telecommunications services was an important argument put forward by the Commission to overcome its objections to the merger on the grounds of collective dominance. In 2012, the Maltese NRA established low countervailing power of customers both in the wholesale market for mobile access and call origination<sup>517</sup> and in the broadband access market<sup>518</sup>, which was considered a factor contributing to the creation of prospective collective dominance between the two biggest operators, but the concerns were lifted in both cases on the evidence of increased retail competition and the existence of fringe or potential competitors.

---

<sup>512</sup> Kokkoris, I., *ibid.*, 438.

<sup>513</sup> Kokkoris, I., Day, L., *Buyer Power in UK Merger Control*, [2009] ECLR, 176-188.

<sup>514</sup> *Ibid.*, 182.

<sup>515</sup> Refer also to Dobson P., Inderst, R., *Differential Buyer Power and the Waterbed Effect: Do Strong Buyers Benefit or Harm Consumers?*, [2007] ECLR, 393f.

<sup>516</sup> Commission decision of 26 June 2000, Case COMP/M. 1741, *MCIWorldCom/Sprint*.

<sup>517</sup> MT/2012/1349.

<sup>518</sup> MT/2012/1375.

### 3.2.3.3. Ambivalent criteria

The former list of Annex II of the Framework Directive included also other factors indicating the lack of prospect for additional market entry notably the existence of a mature market and/or stagnant or moderate growth on the demand side. There is less incentive to enter a mature market, because of high sunk costs and the increased difficulty to attract customers from others as opposed to the possibility of getting customers which are new to the market directly<sup>519</sup>.

A market's growth expectancy may be low, even if entry barriers are low. This might be the case of e.g. saturated markets. In the telecommunication industry, the advances of technology may put the maturity of the markets in question. Indeed, the lack of technical innovation or the presence of mature technology is also considered a factor inductive to coordination. Technological innovations, especially when progressed at a considerable speed, affect the quality of the offered products, thus change the conditions of competition over time by rendering markets unpredictable. Conversely, the competitive advantage offered by technological innovations is absent from markets with mature technology, as well as the need to adopt an aggressive competitive strategy<sup>520</sup>. The maturity of technology often leads to market stability, i.e. to markets with stagnant demand growth, which make competition on prices unprofitable since the size of the market and each firm's market share cannot significantly change<sup>521</sup>.

However, NRAs do not seem to take a unanimous approach to the foregoing factors. For example, one of reasons for the Irish NRA to conclude the existence of collective SMP on the market for mobile access and call origination was that the demand on that market is steadily increasing<sup>522</sup>. By contrast, the Hungarian NRA found that the market players on the market for mobile access and call origination do not collectively hold a dominant position because of the increasing market demand<sup>523</sup>.

---

<sup>519</sup> Navarro and others, *ibid.*, 180-181.

<sup>520</sup> *Ibid.*, 228-229.

<sup>521</sup> Kokkoris, I., *ibid.*, 432.

<sup>522</sup> IR/2004/0121.

<sup>523</sup> HU/2004/0096.

Demand elasticity, which continues to appear in the list of factors of Annex II, has been considered also an ambivalent criterion in the context of collective SMP assessment, because both a high and a low elasticity of demand can enforce collusion<sup>524</sup>. The own price elasticity of demand shows the percentage change in the firm's sales volume following a change in its own price of one per cent. Firms with no observable market power should have a high own price of elasticity at the competitive price level since this indicates that customers can easily switch to another product if the firm were to raise its price. Conversely, a firm with substantial market power should have a low elasticity at the competitive price level since customers will not easily switch to another product if the firm raises its price<sup>525</sup>.

The greater the level of price inelasticity of demand, the bigger the incentive for oligopoly members to engage in parallel behaviour rather than to compete, because joint increases in prices will result in greater collective income and profits<sup>526</sup>. In FI/2005/304 and SI/2006/434, the NRAs considered the low elasticity of demand for wholesale roaming services an indication favouring the existence of collective SMP in the relevant market<sup>527</sup>.

However, economists claim that the practical usefulness of such factor is very limited in establishing dominance, particularly in markets where *cellophane fallacy* problems may occur, like oligopolistic markets<sup>528</sup>, because measuring a dominant firm's elasticity at such price level (of cellophane fallacy) will show that the firm has a relatively high own-price elasticity and so cannot profitably raise prices<sup>529</sup>. In any event, even economists who support the measurement of dominance on the basis of elasticity, suggest the combination of rivals' price elasticity and quantity elasticity with own price elasticity as more appropriate<sup>530</sup>.

---

<sup>524</sup> The ERG paper, p. 10.

<sup>525</sup> Pearce de Azevedo, J., Walker, M., *Market Dominance: Measurement Problems and Mistakes*, [2003] ECLR 641.

<sup>526</sup> Easter, C., Hughes, M., *ibid.*, 193. Case M190, *Nestle/Perrier*, [1992] OJ L 356/1.

<sup>527</sup> Also in IT/2006/0424 and in MT/2006/0443.

<sup>528</sup> Refer to chapter 2 for the definition of the cellophane fallacy problem. It is reminded that in oligopolistic markets, the problem is said to be more acute, because of the complexities that result from the interrelations of the oligopolists.

<sup>529</sup> Pearce de Azevedo, J., Walker, M., *ibid.*

<sup>530</sup> La Cour, L., Møllgaard, H.P., *Meaningful and Measurable Market Domination*, [2003] ECLR: 132-135. Output restriction elasticity has been suggested as a useful complement to market share analysis, which would allow to take account the extent of product substitutability across the market. In differentiated markets, the elasticity is reduced below market share to the extent that other products are

Finally, vertical integration was first included in the list of factors inductive to collective dominance of Annex II of the Framework Directive under the revisions purported with Directive 2009/136/EC. Indeed, the degree of integration in the upstream and downstream market may affect the supplier's willingness to engage in parallel behavior, because it may confer a competitive advantage over its competitors<sup>531</sup>. Commission precedents have considered vertical integration in terms of the homogeneity created between the members of an oligopoly, which may encourage parallel behavior. In *Airtours/First Choice*<sup>532</sup> the pre-merger asymmetries in the degree of vertical integration between oligopoly members were considered a disadvantage against collusion, which would cease to exist after the merger. Also, all operators who were found to be collectively dominant in the NRA notifications to the Commission enjoyed symmetrical degrees of vertical integration. But, in terms of flexibility in restructuring costs, as in the case of economies of scale and economies of scope,

‘the degree of vertical integration in either upstream or downstream markets should not confer a clear cost advantage or disadvantage. It must be assumed that the option of each undertaking as regards its own degree of vertical integration is rational and optimal’<sup>533</sup>.

Hence, vertical integration is taken into account in assessing the symmetry of market positions between market players; it does not appear to place much weight in itself as a criterion capable of enhancing collusion.

### 3.3. Conclusions

Oligopolies comprise grey areas in terms of competitive conditions, hence their assessment entails some degree of arbitrariness and generalization. The decisive factor is the interaction of the criteria and their combined impact on the delineated market, in order not to confuse the normal functioning of an oligopolistic market with

---

good substitutes, because they fill the gap following the output restriction by the firm(s) under investigation, Dobbs, B., Richards, D., *Output restriction as a measure of market power*, [2005] ECLR 572-580.

<sup>531</sup> Kokkoris, I., *ibid* at footnote 60., 432.

<sup>532</sup> Par. 128f of the decision.

<sup>533</sup> Navarro and others, *ibid.*, 231.

oligopolistic dominance. As a result, the same facts may lead to conflicting credible conclusions, i.e. they may support credibly either the existence or the absence of collective dominance on the same market<sup>534</sup>.

It is repeated that this work has not undertaken any complete competition law market analysis on any Member-State to support the existence of collective dominance which escapes regulation.

However, the review of Article 7 notifications by NRAs shows that once an oligopolistic market is identified, the burden of proving that it breaches Article 102 is very onerous. Even in cases where a *prima facie* case of collective SMP can be established, like in the case of wholesale international roaming markets, the subsequent analysis of collective SMP resembles to a search for market characteristics that can negate this preliminary conclusion by proving the absence of one condition. This is comparable with the observation made in the first chapter that there are no Article 102 case precedents, where collective dominance was found to exist. The roaming cases that are discussed in the following chapter make this point.

The impression gained from the review of NRA notifications is that joint dominance is considered a very rare occasion that may arise in symmetrical duopolies, a position that may be possibly in compliance with the approach to light-handed regulation and avoidance of decisional abuse. However, this impression creates concerns on whether SMP regulation may address more complex situations of collective dominance. The roaming cases that are discussed in the following chapter also raise this point.

The analysis of the third chapter supports the conclusion that the factors that should be taken into account by NRAs in prospective determinations of collective dominance in electronic communications markets are limited to the following:

- i) market concentration and particularly the number of players in the market as opposed to market shares, although the existence of symmetries between market players in terms of shares and of cost structures must be taken into account;

---

<sup>534</sup> Etter, B., *ibid.*, 125.

- ii) transparency, which may be presumed in the absence of credible explanation for the justification of alignment of prices in the frame of the *Impala* judgement;
- iii) the existence of retaliation mechanisms, which may be also determined indirectly after the *Impala* judgement;
- iv) the exercise of competitive constraints by the competitive fringe and potential competitors;
- v) the countervailing power of buyers.

The NRAs should collect market data suggestive of tacit collusion and, on this basis build a theory of harm. They should then verify the foregoing factors and establish if they comply with the theory of harm. It is, therefore, suggested that the Guidelines, which were issued before the *Impala judgements*, are revised to provide for the clear set out of the foregoing conditions.



# Chapter 4: The history of Roaming as a potential failure of SMP regulation on oligopolistic markets

---

Having discussed the problem of narrow market definitions and the issues associated with the difficulties in establishing collective dominance under the existing framework for SMP regulation, the present chapter discusses the history behind the regulation of international roaming markets in Europe, as a demonstration of the failure of SMP regulation to address collective dominance issues. International wholesale roaming is taken as a case study of the failure of SMP regulation to fit complex oligopolistic practices involving more than two players into *ex ante* regulation of market power in electronic communications.

The chapter commences with the description of the development of European alliances which lead to the establishment of market power in the European wholesale roaming market. Then, it turns to the review of the twelve market notifications submitted by NRAs on wholesale international roaming under the procedure of Article 7 of the Framework Directive. The notifications are tested against the findings of the previous chapter relative to the difficulties in establishing collective dominance under the SMP framework for electronic communications and particularly to the associated high evidentiary burden. It is submitted that the case of wholesale international roaming is a case more complex than the simpler national collective duopolies that may be capable of being caught under the existing framework; hence, collective market power in wholesale international roaming was dealt with under the Roaming Regulations.

## **4.1. The development of international roaming through European merger cases**

In the pan-European market for the supply of advanced seamless mobile services to businessmen and frequent travelers, including discounted roaming services, the Commission has found oligopoly characteristics, as shown by the evidence collected from merger cases since 1999 and discussed in detail in the present section. According to the Commission findings in the majority of merger cases involving the relevant market, the relevant market of advanced seamless mobile services, including roaming services, presented entry barriers, because of the non-replicable multi-country-coverage nature of relevant networks<sup>535</sup>. The Commission cleared the mergers involving the said market, through the imposition of a number of remedies, which supported a finding of insufficiency of competition law to address the estimated market failures<sup>536</sup>.

At the first stages of development of mobile markets, the Commission considered the establishment of pan-European mobile markets premature and examined solely the horizontal dimension of the concentration in the respective national market and disregarded the intention to create pan-European communication networks. This is strange, because the short intervals between the notifications of acquisitions of European operators create the impression that the acquiring party had a general plan to strengthen its position as a pan-European operator, which was in all likelihood, the predominant factor in the decision to merge. As a result, within the relatively short period of less than one year, it allowed oligopolies to develop at European level, since the same major players were active in a number of European markets and started to impose remedies when SMP had already been established.

In *Deutsche Telekom/ One2One*, Deutsche Telekom, owner of the then second biggest mobile operator in Germany, acquired 100% interest in One2One, one of the four British mobile operators by purchase of shares from its former owners. As DT had no interests in other mobile operators in the UK, the concentration was cleared<sup>537</sup>. The Commission rejected arguments brought by third parties as to the reinforcement of DT' s position in the German mobile market through the offer of pan-European

---

<sup>535</sup> E.g. Case No. COMP/M.1795 *VodafoneAirtouch/ Mannesmann*, 12.4.2000.

<sup>536</sup> Case No. Comp/M.1760 *Mannesmann/Orange*, Notification of 17.11.1999, Case No. COMP/M.2305, *Vodafone Group Plc/Eircell*, 2.3.2001, etc.

<sup>537</sup> Case IV/M.1669 *Deutsche Telekom/ One2One*, Notification of 24.8.1999.

services (at least on the route between Germany and the UK), on the grounds that One2One was not active in the German mobile market, and

‘[e]ven if DT were to start offering services between Germany and the United Kingdom, DT would encounter competition from other mobile operators (such as Mannesmann Mobilfunk, which is jointly controlled by Mannesmann AG and Vodafone/Airtouch) which would be able to offer such services in competition with DT because Vodafone is also operating a mobile service in the United Kingdom. Mannesmann Mobilfunk is the market leader with a share of some 43.5% in the German market. T-Mobil is the second largest operator with a share of 42.6 % of the total subscribers. This is confirmed also by figures provided by the Party, which show that there is currently insignificant traffic between T-Mobil and One2One. Therefore, the notified operation does not lead to a creation or strengthening of a dominant position’<sup>538</sup>.

A couple of months earlier, the Commission had recognised for the first time in *Vodafone/Airtouch* the increasingly European character of mobile markets as a result of roaming facilities. It, nonetheless, established that, because of the then technical impediments, such as difficulties of accessing voice-mail and huge cost divergences, the market under investigation should be considered national<sup>539</sup>. The agreement involved acquisition of sole control by Vodafone over Airtouch, an American operator with participation interests in several European countries. In two of them (Germany and Sweden) the parties had overlapping interests. As the concentration would have raised serious doubts in the German market, where the merged entity would control two out of the three major mobile operators, rendering the market duopolistic, the agreement was cleared upon Vodafone’s undertaking to divest its interest in one of the aforementioned German operators (E-plus).

A similar scenario was identified later on the same year in *Mannesmann/Orange* when the German operator Mannesmann offered to acquire sole control over Orange UK<sup>540</sup>. Both operators were also present in the French and Austrian mobile markets, hence, the concentration was cleared upon Mannesmann’s undertaking to divest Orange’s

---

<sup>538</sup> Par. 14 of the decision.

<sup>539</sup> Case IV/1430, *Vodafone/Airtouch*, Notification of 6.5.1999, paras. 13-17.

<sup>540</sup> Case Comp/M.1760 *Mannesmann/Orange*, Notification of 17.11.1999.

stake in Connect Austria. In this case, the Commission accepted the horizontal overlap in the German and French mobile markets created by the indirect participation of Orange through Hutchinson Telecommunications on the premise of the latter's low market share (<10%) being incapable of affecting Mannesmann's position in the market, also vis-à-vis the strong position enjoyed by FT in the French market and competition by smaller operators.

Less than a month later, on 14.1.2000, *VodafoneAirtouch* and *Mannesmann*, the former being present in 10 European markets and the latter in 7 European markets, including partnerships between them with varying percentages in mobile operators in France, Germany and Italy, announced the former's take-over over the latter. The merger was cleared on condition of de-merger of Orange, which would prevent the new entity from enjoying horizontal cross-interests in more than one mobile operator in the UK and Belgian markets. In its clearance, the Commission established an emerging market for advanced pan-European mobile telecom services to internationally mobile customers, as a separate market from national mobile services<sup>541</sup>.

In this context, the Commission considered that it would be highly unlikely for third parties to replicate, by agreement, the merged entity's network in the near future, comprising of 12 countries, in total. This, in turn, created the entity's ability and incentive to eliminate actual and/or potential competition, as existing and new customers would be attracted by the ability to provide such unique services, and consequently, reinforcement of its market position vis-à-vis other competitors. As a further result, the reinforced position increased the likelihood of dependence on Vodafone's network by other operators<sup>542</sup>. The merger was cleared on condition of the entity's commitment to supply non-discriminatory access to competitors to wholesale services necessary for the launch of seamless pan-European services (wholesale interconnection services and discounted inter-operator roaming tariffs) for three years, which was the estimated necessary period to build competing infrastructure, particularly UMTS<sup>543</sup>. However, UMTS infrastructure did not materialise within the 3-

---

<sup>541</sup> Case COMP/M.1795 *VodafoneAirtouch/ Mannesmann*, 12.4.2000, par. 12f. The geographic scope of the market was left open (par. 26).

<sup>542</sup> *Ibid.*, par. 36f.

<sup>543</sup> *Ibid.*, par. 58-60.

year period set by the Commission, whereas upon expiry of the term, access obligations were not revisited.

One year later, the Commission cleared also the acquisition of Vodafone's sole control over Eircell, the latter being the vehicle to enter into the Irish mobile market. Despite the lack of progress in the establishment of UMTS infrastructure, which had already shown indications of delay, foreclosure concerns in roaming markets in the UK and Ireland were dismissed in the context of undertakings in the *Vodafone/Mannesmann* decision<sup>544</sup>, without renewal of the term of the obligation.

In the course of the same year, FT offered to buy the divested Orange undertaking in exchange of a purchase of 10% of FT's shares by VodafoneAirtouch. As far as the market for seamless pan-European mobile telecommunication services to internationally mobile customers was concerned, the Commission did not express serious doubt because it considered the possibility of FT becoming an effective player on this market within a short-term period unlikely<sup>545</sup>.

On 18.5.2001, Vodafone announced the taking of full control over Airtel, a Spanish mobile operator, formerly owned jointly by Vodafone and BT. The Commission deemed that any concern for market foreclosure in pan-European mobile services and international wholesale roaming services was covered by Vodafone's undertakings in the Mannesmann case<sup>546</sup>.

Part of the response of other European mobile operators to Vodafone's consecutive merger cases leading to the creation of an international group and an almost pan-European network was to form alliances; aiming primarily at the internalisation of traffic. Vodafone used the vertical integration which resulted from its international footprint to start to buy wholesale international roaming increasingly from own group affiliates than from third party network operators. The FreeMove alliance was formed by four of the largest incumbents in the EEA (Telefónica, France Télécom, Telecom Italia and Deutsche Telekom) as a reaction to this new development, thereby

---

<sup>544</sup> Case COMP/M.2305, *Vodafone Group Plc/Eircell*, 2.3.2001.

<sup>545</sup> Case COMP/M.2016, *France Telecom/Orange*, 11.8.2000.

<sup>546</sup> Case COMP/M. 2469, *Vodafone/Airtel*, 26.6.2001.

simulating the effects of vertical integration by agreements and being better able to respond to demand from multinational customers. A second alliance was formed by a number of smaller operators, the Starmap alliance, with the predominant motivation to make joint offers to multinational customers<sup>547</sup>.

At the end of 2005, Telefonica announced its public bid to takeover the UK O2 mobile operator. The review of the notification to the European Commission revealed significant concerns on the future of Starmap alliance, in which O2 was a member, but also for other independent operators. Given the significance of UK and Germany for international roaming, losing O2 as an available transaction partner for reciprocally exchanging international roaming (which would switch to the FreeMove alliance or at least to the roaming policies of its mother company) would affect the Starmap mobile network operators and independent operators, who would be forced to buy international roaming to a larger extent unilaterally, thereby increasing their costs. The only mobile service provider able to compete on an equal foot with FreeMove members would be Vodafone, whereas independent network providers and Starmap members would have their roaming costs increased, which would, in turn, result in increased retail roaming charges to their customers<sup>548</sup>. The Commission cleared the merger on Telefonica's commitment to withdraw from FreeMove alliance<sup>549</sup>. 'Softer' commitments, such as the establishment of an independent roaming committee for O2 and the creation of firewalls in Telefonica were rejected as inadequate, as the Commission also identified the risk of reducing the number of European alliances in the future, because of potential collusion between alliances resulting from the participation of Telefonica and O2 in different roaming groups<sup>550</sup>.

It is clear from the foregoing that, with respect to mobile markets, the Commission has mainly focused on the horizontal assessment of merger cases in the light of strengthening the position of smaller players against market leaders in national markets. As a result, no emphasis appears to have been placed on the effects of the

---

<sup>547</sup> Case COMP/M.4035, *Telefonica/O2*, par. 40.

<sup>548</sup> Par. 61f of the decision.

<sup>549</sup> Par. 68f of the decision.

<sup>550</sup> *Ibid.*

transaction in related markets such as pan-European networks until SMP was already established on such market<sup>551</sup>.

This development is attributed to the original approach of the Commission against any form of intervention in the emerging market of seamless pan-European services (which is the approach of the Commission to all emerging markets<sup>552</sup>) and disregard of minority shareholdings that ultimately developed into exclusive control of national operators.

When the Commission expressed for the first time concerns on the potential leverage of Vodafone/Mannesmann's position as mobile operator on the market for seamless pan-European services to international customers, the merging entities had already established separate considerable presence as providers of pan-European services through subsidiaries or alliances in several European countries. The table on p. 3 of the *VodafoneAirtouch/Mannesmann* decision also shows that the merging entities were already present in a number of European countries through the gradual acquisition of minority shareholdings, which had not been examined in the context of the merger regulation.

Minority share acquisitions are not caught *prima facie* in the ambit of merger control, since the ECMR is intended to catch transactions which lead to one or more undertakings acquiring decisive influence over another<sup>553</sup>. The ECMR covers only situations in which an agreement on a minority share acquisition below the control threshold is part of a long-term plan to acquire control<sup>554</sup>. Apart from such scenario, transactions on minority interests may infringe Article 101(1)<sup>555</sup>.

---

<sup>551</sup> The same pattern was followed also in more recent decisions, taken also after the putting into force of the first Roaming Regulation. In *FT/MidEuropa/ONE*, 21.09.2007, the Commission cleared the acquisition of One by FT and MED, as the means for both partners entering the Austrian mobile market. The impact of the concentration on wholesale international roaming was examined and it was considered not impairing competition, because of the countervailing power of the two bigger mobile operators in Austria and the possibility of operators outside Austria of re-directing traffic if roaming tariffs are worsened.

<sup>552</sup> For example refer to the statements made by Commissioner Liikanen in Press Release IP/04/528 of 23 April 2004.

<sup>553</sup> Article 3 par. 2 of the ECMR.

<sup>554</sup> Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, [2008] OJ C 95/01, par. 38f. For the significance of minority shareholdings in mergers, refer also to Russo, F., *Abuse of Protected Position? Minority*

However, the existence of other forms of possible influence conferring some form of financial dependence may support the reassessment of the position against review of minority share acquisitions from a merger control perspective, particularly in oligopolistic markets. In *Philip Morris*<sup>556</sup>, which was heard before the entry into force of the first Merger Regulation, the CJEU stated that an abuse of dominant position can also arise in situations where the minority shareholding results at least in *some* influence on the commercial policy of the undertaking in question, which could take e.g. the form of a loan, as the Commission later stated in *Gillette*<sup>557</sup>.

With respect to oligopolies, economic studies have supported the view that minority share acquisitions, not granting to the acquiring party a decisive influence in the sense of Article 3 par. 1(b) of the ECMR, can have an impact on competition in Cournot oligopoly markets with high entry barriers and that ownership interests are also capable of facilitating tacit or explicit collusion<sup>558</sup>. This submission is reinforced by the trend of European corporate law to produce initiatives for the participation of minority shareholdings in the management of the company<sup>559</sup>. Petit and Henry also argue that minority shareholdings may significantly contribute to the emergence of collective dominant positions on the market<sup>560</sup>.

In *BT/MCI*, the Commission held that an agreement granting to BT a 20% interest in MCI was not caught by merger control, because, despite provisions in the agreement allowing BT to block any third party from acquiring control over MCI, it did not confer positive control of BT over MCI<sup>561</sup>. However, too much focus on shareholding percentages alone would be a wrong policy, particularly if these are combined with

---

*Shareholdings and Restriction of Markets' Competitiveness in the European Union*, [2006] World Competition, 607-633.

<sup>555</sup> In *Philip Morris*, joined cases 142 and 156/84, *BAT v. Commission*, [1987] ECR 4487, the CJEU held that, in some cases, acquisitions of minority shareholdings can infringe Article 81(1).

<sup>556</sup> *Ibid.*.

<sup>557</sup> Commission decision of 10.11.1992, *Warner-Lambert/Gillette*, [1993] IV/33.440.

<sup>558</sup> Struijlaart, R., *ibid.*, 177-179.

<sup>559</sup> Refer e.g. to Directive 2004/25/EC of the European Parliament and the Council of 21 April 2004 on takeover bids, [2004] OJ L142/12

<sup>560</sup> Petit, N., Henry, D., Why the EU Merger Regulation should not Enjoy a Monopoly over Tacit Collusion – A Close Look at Five Common Misconceptions, 31.1.2010, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1545506](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1545506).

<sup>561</sup> Case IV/M.353, 13.9.1993.



other forms of influence conferring some form of financial dependence, for example, interconnection or roaming agreements in the same or other markets.

Hence, the acquisition of minority shareholdings in several European mobile operators should not have been examined in isolation but in connection with eventual interconnection or roaming agreements that are capable of conferring *some* form of control in the meaning of *Philip Morris* and *Gillette*. The acquisition by operators of minority shareholdings in undertakings that operate horizontally or vertically in their chain of activities may increase transparency and form the vehicle for collusion between the undertakings in roaming markets. The potential influence of minority shareholdings was not examined in the cases assessed until the Vodafone/Mannessman case.

At that stage, the parties committed themselves to ensure non-discriminated access by third parties on the merging entity's network, which appeared in practice the less burdensome remedy: given the background of development of the market, it is unlikely that the Commission would impose any kind of impediment on the newly developed market. In addition, the Commission's expectations on the development of UMTS did not materialise<sup>562</sup>.

At the time there were already concerns voiced about excessive charges on international roaming rates, as discussed in the following sub-section. Such concerns were not examined in the context of the merger decisions between European operators. The following section will demonstrate that the existence of different alliances across Europe for the provision of roaming services was crucial for the inability of NRAs to establish SMP on the respective wholesale national markets.

## **4.2. Regulation of international roaming in Europe**

### **4.2.1. The original complaints about excessive prices in roaming markets**

---

<sup>562</sup> Rowe, H., *Local Loop Unbundling – UK: The UK Trade and Industry Committee Report on Local Loop Unbundling*, [2001] Comp. & Sec. Law Rep., 252-253. Only 16 out of the 42 licenses offered in auction in November 2000 were sold.

Since the end of the nineties, the European Commission received a number of complaints that roaming charges were too high and/or complaints about refusal to provide roaming services<sup>563</sup>. The pan-European study conducted by the International Telecommunications Users Association (INTUG) on European roaming retail tariffs had indicated differences in price between roamed and non-roamed international mobile calls to the same destination within the EU up to 500%, which suggested lack of effective competition at wholesale level<sup>564</sup>. The suggestion was enhanced by the poor response to the attempt of the European VPN Users Association (EVUA) to solicit interest from suppliers in providing borderless services to a range of very large corporate customers, which indicated reluctance by the major operators to break away from the established collusive inter-operator practices with respect to international roaming<sup>565</sup>.

Further, GSM operators had been structuring prices in a way, which made it extremely difficult for customers to ascertain the best suitable price of roaming calls, since from one country to another prices depended on the time of the call, the unit charged etc. According to the data published by INTUG in the aforementioned report and quoted by Sutherland<sup>566</sup>, information provided may be inaccurate, incomplete or only approximations, whereas costs and mark-ups varied between operators. Although there was some plausible technical explanation for differences in costs (such as marketing strategies of operators, costs of access to international circuits, volume of traffic, differences in labour or capital costs, international exchange rates, licence fees), the level of difference in rates raised concern as to the true existence of plausible explanation. The ERG identified possible abuses of SMP at retail level resulting from high margins imposed by operators for international roaming<sup>567</sup>.

In the International Roaming Inquiry launched by the Commission in 1999<sup>568</sup>, the Commission found evidence of knowledge of IOT tariffs between European operators. Prices had been aligned and there had been synchronised price increases. In particular,

---

<sup>563</sup> European Commission, *Working Document on the Initial Findings of the Sector Inquiry into Mobile Roaming Charges*, Brussels, 2000, at p.6.

<sup>564</sup> Sutherland, E., *International Roaming Charges: over-charging and competition law*, [2001] 25 Telecommunications Policy, 9.

<sup>565</sup> *Ibid.*, 10.

<sup>566</sup> *Ibid.*, 14-18.

<sup>567</sup> The ERG Common Position on SMP remedies, 118.

<sup>568</sup> [http://www.europa.eu.int/comm/competition/antitrust/others/sector\\_inquiries/roaming](http://www.europa.eu.int/comm/competition/antitrust/others/sector_inquiries/roaming).

it was discovered that in the course of the Inquiry (1997-2000), most of the operators that had the lowest wholesale tariffs have raised their tariffs gradually, while most of the operators that had the highest wholesale tariffs have lowered their tariffs, but all tariffs converged to a higher overall level that did not appear to bear relation to cost<sup>569</sup>. This was considered indication of collective reaction towards raising the benchmark price which might have been imposed under future regulation, notably, that the operators had tried to create a level of IOTs at which the benchmark would have been considered satisfactory; hence, instance of collusion<sup>570</sup>.

Also, the results of the Inquiry into roaming established lack of price elasticity, similarity of cost structures, symmetrical market positions, transparency of roaming agreements and homogeneity of roaming services as factors contributing to a market conducive to parallel behaviour by oligopolists<sup>571</sup>. It was also found that the GSM operators had chosen to interpret the non-discrimination obligation so absolutely that they offered only the most trivial discounts on Inter-operator Tariffs (IOTs), which established instance of collusion, because in a properly functioning market, a large or an expanding buyer should be able to negotiate a better price<sup>572</sup>.

The European Parliament adopted the Report on the 1999 Communications Review, which identified high charges for international roaming as evidence of market imperfections and urged the Commission to consider possible ways of lowering such prices to acceptable and transparent levels. However, at the same time, it opted against regulatory intervention in the mobile communications market, which was said to have grown freely<sup>573</sup>.

#### ***4.2.2. Roaming under the 2002 regulatory framework for electronic communications***

---

<sup>569</sup> European Commission, *Working Document on the Initial Findings of the Sector Inquiry into Mobile Roaming Charges*, Brussels, 2000, at p.3.

<sup>570</sup> Sutherland, E., *International Roaming and Competition Law*, [2001] CTRLR, 147.

<sup>571</sup> European Commission, *Working Document on the Initial Findings of the Sector Inquiry into Mobile Roaming Charges*, Brussels, 2000, at p.23-25.

<sup>572</sup> Sutherland, E., *International Roaming and Competition Law*, [2001] CTRLR, 146.

<sup>573</sup> *Ibid.*, 11. Report on the Commission communication to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions entitled: 'Towards a new framework for Electronic Communications infrastructure and associated services – The 1999 Communications review', COM(1999) 539, A5-0145/2000.

Wholesale international roaming was included in the list of markets susceptible of *ex ante* regulation under the 2002 framework<sup>574</sup>. However, NRAs did not show eagerness to conduct the relevant research on their respective national markets, despite the launching of Commission investigation in 2004 and 2005 for the high Inter-Operator-Tariffs (IOTs) charged by the mobile operators Vodafone and T-Mobile in Germany and by Vodafone and O2 in the UK, which, according to the Commission, resulted in high roaming charges for consumers, as the IOTs are passed on to the end-users<sup>575</sup>. By the end of 2005, only the Finnish NRA had conducted an analysis of the roaming market<sup>576</sup>.

In FI/2005/304, FICORA established the existence of factors inductive to co-ordinated behaviour between the two players active in the national roaming market, like high market concentration, low elasticity of demand, homogeneity of the product, and high entry barriers. Nonetheless, it found *no evidence* that the undertakings have coordinated their behavior, on the grounds that they have competed for roaming traffic by concluding preferential agreements and offering discounts to foreign MNOs. Ficora also observed that market growth has not been evenly distributed and that market shares have varied significantly among operators. Discount agreements have in Ficora's view made the market less transparent which would make it difficult to monitor rivals' behaviour and observe any deviation from a coordinated outcome.

The Commission did not share Ficora's optimism on future reduction of roaming rates and the lack of SMP in the market, so, it asked it to monitor the development of Finnish operators' effective IOTs net of all discounts and analyse very closely these findings:

“Should effective IOTs net of discounts continue to rise or remain at their present level despite the ongoing implementation of traffic direction techniques, then Ficora is invited to review the effectiveness of competition without any undue delay in close co-operation with the National Competition Authority (“NCA”)”.

---

<sup>574</sup> Market 17 of the 2003 Recommendation.

<sup>575</sup> IP/05/161, February 10, 2005 and IP/04/994, July 26, 2004.

<sup>576</sup> Case FI/2005/0304.

Less than two months later, in February 2006, the European Commission announced its intention to impose an EC Regulation governing IR charges<sup>577</sup>. Then, the NRAs of another 11 member-states commenced gradually their market research on the international roaming market<sup>578</sup>. None of them concluded on a finding of joint (or individual) SMP on the relevant markets. However, like in FI/2005/304, the reading of the decisions does not convince that the Commission shared the views of the NRAs on the lack of (joint) dominance; rather, it accepted the inability to establish joint SMP due to the complexities involved in this task or to the unwillingness to reach such finding by the NRAs.

More specifically:

In IT/2006/393, AGCOM concluded based on the analysis of the criteria for finding of collective dominance in the form of tacit coordination, that these criteria are not cumulatively met, particularly due to the lack of a credible retaliation mechanism, although it recognized the high level of international roaming prices for end-users, which may limit the use of mobile communication services outside national boundaries and which may constitute an obstacle to the development of the single European electronic communications market. The Commission recognized the difficulties inhered, which it attributed mainly to the cross-border nature of wholesale international roaming charges:

“The Commission notes in this respect that it has not so far been possible, for a national regulator *alone, also because of the cross-border nature of international roaming services*, to act effectively to address the high level of wholesale international roaming charges. The Commission is therefore considering the adoption of EU measures to address the high international roaming prices” [*emphasis added*].

In AT/2006/0466, TTK pointed to the fact that the firms active on the Austrian market for wholesale roaming services were highly asymmetric (in particular with regard to economies of scale and financial performance), thus making co-ordinated forms of

---

<sup>577</sup> Commissioner Reading, *Towards a true internal market for electronic communications*, European Regulators Group Paris, 8 February 2006, [http://europa.eu/rapid/press-release\\_SPEECH-06-69\\_en.htm](http://europa.eu/rapid/press-release_SPEECH-06-69_en.htm)

<sup>578</sup> These member states were Austria, the Czech Republic, Denmark, Estonia, Greece, Ireland, Italy, Poland, Slovenia, Spain and Sweden.

behaviour difficult and ultimately unlikely to sustain. Similarly, TKK argued that on markets characterized by high levels of demand fluctuation (as in Austria, where most roaming traffic occurs during only a few months of the year, the holiday season) collusive or concerted forms of market behaviour among firms were unlikely to be sustainable and considered insufficient level of market transparency:

“Thus, overall, TKK has not been able to *prove* the existence of collective dominance in the market”.

The Commission noted that TKK has not found SMP in the market and therefore has not been in the position to regulate it, despite concerns related to high prices and,

“To deal with such *difficulties*, the Commission adopted on 12 July 2006 a proposal for a regulation of roaming on public mobile networks within the European Union”.

Exactly the same comment was raised by the Commission in CZ/2006/452<sup>579</sup>, in DK/2006/419 and in SI/2006/434<sup>580</sup>. In the last two cases, as well as in AT/2006/466, ES/2006/460, IE/2006/477 and GR/2006/558, the NRAs placed much emphasis on the fact that, in each of the different countries, the large operators belonged to different pan-European alliances and therefore received traffic directed from their alliance partners, which made it difficult to reconcile with co-ordination also at the national level; the difficulties lay in the lack of transparency due to the frequent rebates given to alliance partners and to the absence of a credible retaliation mechanism, as a result of the participation of operators to different pan-European groups. The Danish and Greek NRAs<sup>581</sup> did not exclude the possibility of collective dominance in the short term, but considered that such dominance would not be tenable in the long run. The Irish NRA recognized that the international roaming market exhibited characteristics that would

---

<sup>579</sup> Although the decision gives no details of the reasons pleaded by the Czech NRA on its inability to prove the existence of joint SMP.

<sup>580</sup> APEK listed a number of circumstances that would indicate that Mobitel and Si.mobil could possibly exercise market power collectively, i.e. the highly concentrated market, the fact that market shares have remained stable over time, the high barriers to entry, the maturity of the market, the non-elasticity of demand and the homogeneity of the products concerned (calls and SMS). However, APEK mentions five circumstances which, in APEK’s view, prevent the existence of a collective dominant position: 1) the lack of price alignment between the two operators, 2) the high degree of countervailing buyer power from large operators belonging to alliances, 3) the fact that operators belonging to the same alliance may offer each other discounts on IOTs, which decreases market transparency and prevents retaliation, 4) the absence of informal links between Mobitel and Simobil, and 5) the existence of traffic direction technology.

<sup>581</sup> DK/2006/419 and GR/2006/558 respectively.

be conducive to coordinated behaviour between O2 and Vodafone, but considered sustainability of such form of coordination unlikely, since membership of an international alliance is difficult to reconcile with coordination at the national level. In the same line, in SE/2006/496, the lack of market transparency and of credible retaliation mechanisms resulting from the participation of operators to different international alliances were crucial in the finding against collective SMP<sup>582</sup>, albeit the Swedish NRA established a number of factors inductive to collective dominance like high market concentration, the saturated market, lack of market dynamics and the absence of dramatic shifts in wholesale prices<sup>583</sup>, as well as the existence of market and cost symmetries between the three large operators.

The lack of transparency and of retaliation mechanisms was determinative in the finding against SMP also in the Estonian international roaming market<sup>584</sup>. SIDEAMET found that inbound originating prices are not public so that Estonian MNOs cannot observe the price strategy of the others and that the overall capacity growth on the market and the increase in the use of traffic direction technology resulting from agreements made in the context of international alliances prevent any kind of coordination.

It is also noteworthy that the UK and Germany, involved in the investigations launched by the Commission in 2004 and 2005 did not have the research conducted in their relevant markets, albeit the Commission recognised in *Telefonica/O2*<sup>585</sup> the increased significance of these two markets for European international roaming. The French NRA did not conduct the relevant market research either.

In short, the NRAs that conducted their market research on the international roaming market, on the one hand, acknowledged the existence of excessive international roaming charges compared with national calls, as well as the existence of factors

---

<sup>582</sup> In PL/2006/517, UKE stated that the use of confidential rebates agreed individually between roaming partners decreased market transparency and made it increasingly difficult for MNOs to monitor competitors' activities. UKE concluded that the market was insufficiently transparent to enable MNOs to reliably detect if a competitor deviated from a possible co-ordinated behaviour. Nonetheless, in this case, the market, although concentrated, was found also to be immature, with unstable market shares and significant differences in the pricing of the relevant services.

<sup>583</sup> Although PTS emphasized the fact that prices are generally lower in Sweden than in most other Member States.

<sup>584</sup> EE/2007/629.

<sup>585</sup> Case COMP/M.4035, *Telefonica/O2*, 10.1.2006.

inducing the market to a co-ordinated outcome. On the other hand, they placed emphasis on the existence of the pan-European alliances for the provision of roaming services, which they considered inhibiting transparency and retaliation mechanisms among national operators, hence tacit co-ordination between them. It is noted, though, that, despite the increasing use of manual roaming possibilities, which enabled travellers to chose non-preferred networks, the prospect of retaliatory mechanisms at retail level through ‘price wars’ consisting in the deviation from the principles of the common commercial strategy, was not examined (albeit accepted by the Commission in Case ES2005/0330 on mobile access and call origination).

#### **4.2.3. The introduction of Roaming Regulations**

However, the NRAs failed to identify the root cause of the problem<sup>586</sup>. It is noted that before completion of the relevant market reviews by NRAs, the ERG had found that the direction of international roaming traffic towards alliance or group partners was increasing at the expense of international traffic towards independent mobile network operators, even if non-alliance operators offered lower prices, which indicated low elasticity of demand<sup>587</sup>. In the same line, it is also noted that the findings of the Court in *Impala* with respect to transparency in the examination of collective dominance cases appear not to have been taken into account by the NRAs in the examination of international roaming markets, at least in the cases notified after the issue of the GC’s decision<sup>588</sup>. Notably, if a finding of a common policy on excessive roaming rates, given the existence of other factors characteristic of a collective dominant position, like the factors established by the Greek and Irish NRAs, might have under the specific circumstances of the roaming market and in the absence of an alternative explanation, suffice to demonstrate the existence of a dominant position, without them being necessarily required to positively establish market transparency<sup>589</sup>.

---

<sup>586</sup> Refer also to Sutherland, E., *International Mobile Roaming*, [2006] CTLR, 269.

<sup>587</sup> The ERG paper, par. 61.

<sup>588</sup> Judgment of the Court of First Instance of 13.07.2006, Case T-464/04.

<sup>589</sup> In comparison with the Court’s finding in par. 252 of the judgment. It is reminded that the CJEU upheld the relevant finding of the GC and indicated that competition authorities should avoid mechanical approach to the *Airtours* criteria based on the separate verification of each criterion in isolation, while disregarding the general economic mechanism of potential tacit coordination (par. 123-125).



Hence, the position that eventual discounts granted to alliance partners affected market transparency may have been debatable.

On the other hand, the Commission recognised the transnational nature of the services<sup>590</sup>, but did not commence the process of Article 15 par. 4 of the Framework Directive for the identification of the relevant transnational market that would merit the application of *ex ante* regulatory measures, although a) in April 2006, average international roaming charges across the EU were almost four times higher than domestic tariffs and the operator's average margins for calls originated while roaming were above 200%<sup>591</sup> and b) the Commission acknowledged earlier the same year in *Telefonica/O2* the possibility of collusion between the biggest international alliances operating in the European roaming market<sup>592</sup>. Instead, it decided to depart from the mechanism of the Framework Directive and passed Regulation No 717/2007 of the European Parliament and of the Council on roaming on public mobile telephone networks within the Community introducing price caps on both wholesale and retail roaming charges for a period of three years<sup>593</sup>.

The Commission attributed the reasons behind the decision to depart from the framework for the regulation of SMP on electronic communications to the trans-border nature of international roaming services and to the fact that

“regulatory authorities at national level have indicated that the problem cannot be addressed using existing regulatory tools, considering its cross-border dimension and have called on the Commission to propose a single market solution”<sup>594</sup>.

This explanation does not mean that the Commission was convinced of the lack of concerns about the exercise of SMP in international roaming markets. On the contrary,

---

<sup>590</sup> Refer particularly to IT/2006/393.

<sup>591</sup> European Commission, *Commission staff working paper – Impact assessment of policy options in relation to a commission proposal for a Regulation of the European Parliament and the Council on roaming on public mobile networks within the Community*, SEC (2006) 925.

<sup>592</sup> Case COMP/M.4035, *Telefonica/O2*, 10.1.2006, par. 40f.

<sup>593</sup> [2007] OJ L 171/32.

<sup>594</sup> European Commission, *Commission staff working paper – Impact assessment of policy options in relation to a commission proposal for a Regulation of the European Parliament and the Council on roaming on public mobile networks within the Community*, SEC (2006) 925, 10, 25.

“the work undertaken by the national regulatory authorities (both individually and within the European Regulators Group) in analysing the wholesale national markets for international roaming has demonstrated that it has not yet been possible for a national regulatory authority to address effectively the high level of wholesale Community-wide roaming charges because of the *difficulty* in identifying undertakings with significant market power in view of the specific circumstances of international roaming, including its cross-border nature”<sup>595</sup>.

The Commission did not challenge directly the findings of the twelve NRAs who did not prove SMP on their relevant roaming markets, but put more politely the following:

“The national regulatory authorities responsible for safeguarding and promoting the interests of mobile customers normally resident within their territory are not able to control the behavior of the operators of the visited network, situated in other Member States, on whom those customers depend when using international roaming services”<sup>596</sup>.

Indeed, it is doubted that any national regulator would address the issue of tariffs imposed on foreign operators for delivering calls on domestic operators’ networks, thus limiting the latter’s profit margins set in favor of international roaming customers and foreign mobile network operators, particularly since the cause of the difference behind costs and retail rates was attributed to cross-subsidization practices of (lower) national rates by roaming rates charged to the international wholesale and retail customers<sup>597</sup>. The practice of favoring domestic operators against operators from other member-states is not uncommon: for example, it is interesting to note that such approach was followed by the French NRA with respect to the termination of SMS services; as a consequence of the proposed reciprocity clause, operators established in other EU countries would not always be offered SMS termination in France at the same rates as French mobile operators. In case they did not agree on the price level regulated in France, or were not regulated at this price level, a higher, non-regulated

---

<sup>595</sup> The Roaming Regulation, recital 6.

<sup>596</sup> The Roaming Regulation, recital 8.

<sup>597</sup> Forrester, I., *Sector-specific Price Regulation or Antitrust Regulation A Plague on Both Your Houses?*, [2007] European University Institute Papers, 12-13.

price would apply<sup>598</sup>. The Commission considered that the reciprocity clause constituted a measure which may lead to an indirect discrimination prohibited under EU law<sup>599</sup>. Also, in DK/2011/1181 and DK/2012/1283 the Commission expressed serious doubts because the Danish NRA only operators competing with Danish operators at retail level may obtain the regulated rates for SMS termination services, hence the measure would apply to the detriment of foreign operators who would not compete on the Danish retail market and would be charged with rates almost three times higher than the regulated rate<sup>600</sup>.

It is, thus, reasonable to assume that NRAs would have refrained from regulating wholesale international roaming tariffs at a national level<sup>601</sup>.

Despite considerations on consumer protection and the fostering of internal market expressed by the Commission<sup>602</sup>, it is supportable to assume that the Roaming Regulation objectively enhances market efficiency and market conditions by removing appreciable (economic) distortions of competition in the international roaming sector<sup>603</sup>. This appears to be the true objective of the Roaming Regulation, since neither the wholesale nor the retail sector for international roaming services was fully competitive<sup>604</sup>. It is also supportable to assume that such competition concerns stem mainly from joint rather than single SMP, since it was acknowledged both by NRAs

---

<sup>598</sup> FR/2010/1094. ARCEP explained that a different treatment was justified because operators were placed in situations which were objectively different (i.e. regulated and non-regulated operators) and that a different treatment addressed a general interest objective (i.e. to remedy the fact that French regulated operators would be put at a disadvantage if their non-regulated partners established in other countries charged a different SMS termination rate)

<sup>599</sup> The Commission considered that ARCEP's differentiation based on the administrative nature of the "regulated" and "non-regulated" operators lacks well-founded rationales and is artificial since all operators established in other EU countries than France, are de facto to be considered as "non-regulated" operators, and therefore potentially subject to different operating conditions, independently of any other objective criteria relating to the provision of the SMS services. Finally, the Commission notes that reciprocity is not foreseen to be fully applied between regulated national operators, which makes the differentiation criterion less obvious.

<sup>600</sup> The serious doubts were lifted in DK /2012/1323, after the change of remedies and to the imposition of symmetric regulation on all operators regardless of their operation in Denmark.

<sup>601</sup> Brennecke, M., *The EU Roaming Regulation and its non-compliance with Article 95 EC*, October 2008, Heft 79 in Essays on Transnational Economic Law, Martin Luther University Halle-Wittenberg, 33.

<sup>602</sup> Refer to recital 11 of the Roaming Regulation.

<sup>603</sup> Brennecke, M., *ibid.*, 40. In fact, Brennecke argues that Article 95 (now article 114 TFEU) should not have been taken as the legal basis for the Roaming Regulation, but that the correct basis should have been article 308 (now article 356 TFEU).

<sup>604</sup> *Ibid.*, 37-38.

and the Commission that roaming markets display more oligopoly than monopoly characteristics.

In 2009, following review of the roaming market by the Commission in September 2008, the Regulation was amended by Regulation 544/2009<sup>605</sup>, in order to extend the regulated period for roaming charges by two additional years (until 30.06.2012), to include SMS and data (wholesale only) roaming services in the basket of regulated services and to introduce stricter price caps and common billing unitisation practices. The persistence of high wholesale charges in roaming was primarily attributable to high wholesale prices charged by operators of non-preferred networks, with the result of having variances of up to 30 times higher the charges between preferred networks<sup>606</sup>. By expiry of the extended term of roaming regulation, the Commission estimated that, despite the drop of roaming rates below, but close to regulated price caps, retail roaming prices were on average at least 118% higher than their underlying costs<sup>607</sup>.

The persistence of high wholesale charges after the first two years of application of regulated roaming rates, despite the termination of the international alliances in the meanwhile creates additional doubt on the NRAs findings in their notifications on the increased significance of such alliances in terms of transparency and retaliation in their national markets.

In June 2012, the 2009 Roaming Regulation was replaced by Regulation No 531/2012 on Roaming on Public Mobile Communications Networks within the Union<sup>608</sup>. The new Roaming Regulation maintains price caps until 30.06.2017 for retail and until 30.06.2022 for wholesale, but as an interim measure only. The difference purported with the 2012 Roaming Regulation is that by 2014, at wholesale level, network operators will have to unbundle European roaming services, notably they must give network access to alternative operators, including MVNOs and resellers from other

---

<sup>605</sup> [2009] OJ L 167/12.

<sup>606</sup> Regulation 544/2009 amending regulation 717/2007 on roaming on public mobile telephone networks within the Community, recital 45.

<sup>607</sup> Stuckmann, P., *EU Roaming Regulation – Towards Structural Solutions*, presentation for the WTO in Geneva 2012, [http://www.wto.org/english/tratop\\_e/serv\\_e/sym\\_march12\\_e/presentation\\_stuckmann.pdf](http://www.wto.org/english/tratop_e/serv_e/sym_march12_e/presentation_stuckmann.pdf)

<sup>608</sup> [2012] OJ L 172/10.

Member States at regulated wholesale prices to enable separate sale of roaming services in other European countries<sup>609</sup>. This is claimed to make it easier for alternative operators to offer competitive roaming services<sup>610</sup>. At retail, consumers will have the right to choose an alternative provider for EU-wide roaming services, benefiting from lower prices, while keeping their usual provider when they're at home<sup>611</sup>.

The introduction of unbundling in roaming services was the result of the increasing demand for mobile broadband by travellers. But, despite transparency measures introduced with the 2007 and 2009 roaming regulations, the reductions at wholesale level were found not to be passed on to retail level in data services and for this reason price caps on retail data roaming services were also introduced by virtue of the latest Roaming Regulation<sup>612</sup>, at least for a period that the Commission considers that competition will remain ineffective.

According to the information provided by the European Commission in September 2013<sup>613</sup>, the introduction of the Regulations on Roaming were successful from the point of view of prices and volume:

- Retail prices across calls, SMS and data were reduced by over 80% since 2007; at the same time, concerns expressed on the potential raising of domestic mobile rates, as a result of the limitation or termination of subsidies from roaming rates<sup>614</sup> did not materialize,
- Data roaming was up to 91% cheaper compared to 2007 and increased by 630% in terms of volume.

However, these data did not stop the Commission from going even further. In September 2013 the Commission introduced radical proposals for the total pushing of roaming out of the market starting with the ban of charges for incoming calls from July

---

<sup>609</sup> Article 1 par. 1 of Regulation 531/2012.

<sup>610</sup> Article 1 par. 3 of Regulation 531/2012.

<sup>611</sup> Speech 11/502 of 06.07.2011 by Neelie Kroes, available at [http://ec.europa.eu/information\\_society/activities/roaming/index\\_en.htm](http://ec.europa.eu/information_society/activities/roaming/index_en.htm).

<sup>612</sup> Commission Report on the outcome of the functioning of Regulation No 717/2007 as amended by Regulation No 544/2009, COM(2011) 407 final, 9.

<sup>613</sup> <https://ec.europa.eu/digital-agenda/en/roaming>

<sup>614</sup> Forrester, I., *ibid*.

1<sup>st</sup>, 2014<sup>615</sup>. As announced by Commissioner Kroes on 12.09.2013, the determination is now to end roaming, not just reduce the price, through a ‘carrot and stick’ approach to operators with the carrot being the lifting of European regulation, on condition of extension of domestic bundles from 2014 so that by 2018 at the latest, customers throughout the Union are able to use their phones and smartphones while travelling throughout the Union at domestic rates. The stick is the application of the 2012 Roaming Regulation forcing operators to offer their customers the possibility to roam with alternative roaming providers in order to take cheaper roaming services from a local company or a rival company in the home country with the same number and the same bill<sup>616</sup>.

This development is to be examined also in relation to the suggestion for the adoption of wider product market definitions encompassing all on-net/off-net calls that was discussed in the second chapter. Notably, it may be the case that, had wider market definitions been adopted for all on-net and off-net calls respectively, domestic rates may have been applied on all roaming services, whether national or international. It may have been the case that the competition concerns in relation to international roaming stemming from possible tacit co-ordination between international operators may have been dealt with at an earlier stage through the regulation of on-net and off-net call termination markets, instead of having recourse to additional regulatory instruments like the Roaming Regulations.

### **4.3. Brief conclusions on the case of roaming**

In summary, a careful reading of the history behind roaming regulation appears to support the argument of this thesis that SMP regulation has failed to address issues of collective dominance in wholesale roaming markets<sup>617</sup>. On the one hand, the NRAs of the biggest national markets in terms of wholesale international roaming markets refrained from conducting the relevant market review; on the other hand, the NRAs of

---

<sup>615</sup> Proposal for a Regulation of the European Parliament and of the Council laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, and amending Directives 2002/20/EC, 2002/21/EC and 2002/22/EC and Regulations (EC) No 1211/2009 and (EU) No 531/2012, Article 37.

<sup>616</sup> SPEECH/13/693 of 12/09/2013.

<sup>617</sup> SPEECH/13/693 of 12/09/2013.

the member states that did perform the relevant exercise declared themselves unable to prove the existence of SMP, because of the trans-border dimension of roaming issues, albeit they all recognised the existence of high rates and in the majority of cases, they accepted the existence of factors indicative of a market with collective dominance, whereas some of them accepted the potential existence of joint SMP in the short term.

The justification provided for the existence of different alliances across Europe for the provision of roaming services was crucial to the inability of NRAs to establish SMP on the respective wholesale national markets. However, starting from the late nineties, such alliances were created as a result of consecutive mergers and minority share acquisitions between European operators that were cleared unconditionally as far as roaming issues were concerned or were not notified at all. It is also reasonable to assume that NRAs have refrained from regulating wholesale international roaming tariffs at a national level, thus, from limiting the profit margins of national operators set in favor of international roaming customers and foreign mobile network operators.

Further, the process for the identification of trans-border roaming markets susceptible to ex ante regulation was not adhered to, despite the acknowledged cross-border nature of the services and the possibility of collusion between the biggest international alliances operating in the European roaming market. It is, therefore, supportable to assume that, in recognizing the failure of SMP regulation to address collective dominance in wholesale roaming markets, the Commission decided to depart from the SMP framework in electronic communications and passed the Roaming Regulations<sup>618</sup>. According to the Commission, the volume of the roaming market has increased and rates have fallen, whereas concerns on adverse effects on national mobile rates did not materialize.

Having now completed the analysis of factors capable of establishing collective dominance in the context of SMP framework for electronic communications, we shall turn to the remedies imposed on SMP operators under the same framework and examine them from the aspect of their application on oligopolistic markets.

---

<sup>618</sup> For an opposite view, refer to Forrester, I., *ibid*, 13, who considers this regulatory intervention ‘a case of opportunistic populism in the guise of consumer protection’.

# Chapter 5: Available remedies under SMP regulation and their effectiveness for the regulation of oligopolistic markets – Part I.

---

## 5.1. Outline of the measures provided in the Directives

The present chapter is the first of the three chapters of this thesis that examine the effectiveness of remedies imposed on SMPs that operate in oligopolistic markets. The remedies are distinguished into transparency, non-discrimination, access obligations, separation of accounts and functions and pricing obligations.

The chapter commences with the description of applicable provisions of the legislative framework and then examines the separate categories of measures, in turn. The present chapter deals with obligations on transparency, non discrimination, separation of accounts and functions and access obligations. The following analysis will show that the first two (transparency and non discrimination) together with accounting separation form essentially one and the same measure. Functional separation is also discussed in the present chapter, because the underlying principles behind its establishment are similar to, if not the same as those behind accounting separation.

Access issues are found at the core of SMP regulation, since the market position of alternative providers has developed on the basis of pervasive access regulation, although many entry barriers remain<sup>619</sup>. Access obligations rest on earlier competition case law on refusal to supply by dominant undertakings and the essential facility doctrine which is widely discussed in competition law literature.

---

<sup>619</sup> Refer to Commission Staff Working Document accompanying to the Commission Recommendation on regulated access to Next Generation Access Networks (NGA), SEC 2010, 237 final, 9.



The review will demonstrate that the categories of remedies discussed in the present chapter should be applied with caution in oligopolistic markets, whereas the effectiveness of functional separation in oligopolistic environments is debatable. Although inevitable for the regulation of electronic communications markets, access obligations enhance co-operation between the undertakings involved and, as such, are capable of enhancing collusion. The chapter ends with the suggestion for an alternative in the form of quasi-contract that may apply instead of direct access obligations in oligopolistic markets.

### **5.1.1. Applicable provisions and principles**

The obligations imposed by NRAs on SMPs in wholesale markets with ineffective competition are selected out of a pool of measures listed in Articles 9-13 and 13a of the Access Directive (as revised under Directive 2009/140/EC)<sup>620</sup>, notably:

- a) Transparency obligations, i.e. the obligation to make public specific information (e.g. accounting information, technical specifications, network characteristics, conditions for supply and use, prices or other), and/or to publish a “sufficiently unbundled” reference offer for access to their networks<sup>621</sup>. The publication of a reference offer is mandatory for SMPs with an obligation to provide wholesale network infrastructure access<sup>622</sup>.
- b) Non-discrimination, i.e. the obligation on an operator to provide interconnection and/or access to competitors under equivalent terms<sup>623</sup>.
- c) Obligations on accounting separation in relation to specified activities<sup>624</sup>.
- d) Obligation to provide access to and use of specific network facilities. This includes the requirement to negotiate in good faith and meet reasonable requests for access to the local loop or other network elements, interconnection, co-location or other forms of facility sharing, operational support systems or similar software systems,

---

<sup>620</sup> Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities, [2002] OJ L108/7.

<sup>621</sup> Article 9 of the Access Directive.

<sup>622</sup> *Ibid.*, Article 9 par. 4.

<sup>623</sup> *Ibid.*, Article 10.

<sup>624</sup> *Ibid.*, Article 11.

etc. NRAs may attach to this obligation conditions of fairness, reasonableness and timeliness<sup>625</sup>.

- e) Price control and cost accounting obligations<sup>626</sup> and
- f) Functional separation of vertical operations<sup>627</sup>.

Article 17 of the Universal Service Directive<sup>628</sup> provides for “appropriate” regulatory controls on retail services, based on the nature of the problem identified, proportionate and justified in the light of the objectives laid down in Article 8 of the Framework Directive<sup>629</sup>, including

“requirements that the identified undertakings do not charge excessive prices, inhibit market entry or restrict competition by setting predatory prices, show undue preference to specific end-users or unreasonably bundle services. National regulatory authorities may apply to such undertakings appropriate retail price cap measures, measures to control individual tariffs, or measures to orient tariffs towards costs or prices on comparable markets, in order to protect end-user interests whilst promoting effective competition”<sup>630</sup>.

The Universal Service Directive establishes the additional requirement that NRAs cannot impose measures on SMPs operating in any retail market, unless they have concluded first that the obligations imposed under the Access Directive at wholesale level did not result in achieving the objectives of Article 8 of the Framework Directive. In this sense, retail regulation is regarded as a tool of last resort<sup>631</sup>. The general trend away from retail regulation towards wholesale regulation reflects a desire on the part of regulators to treat the cause rather than the effects of market power<sup>632</sup>. Also, the principle of the minimum possible intervention in the frame of the general trend

---

<sup>625</sup> *Ibid.* Article 12.

<sup>626</sup> *Ibid.* Article 13.

<sup>627</sup> *Ibid.* Article 13a.

<sup>628</sup> Directive 2002/22/EC on universal service and users’ rights relating to electronic communications networks and services, [2002] OJ L108/51.

<sup>629</sup> The principles laid in Article 8 of the Framework Directive include network independence, no distortion or restriction of competition, promotion of legal certainty, promotion of network-based competition, if possible, and of trans-European networks, effective spectrum management, addressing special users’ rights, imposition of regulatory measures only in markets with ineffective competition etc.

<sup>630</sup> Article 17 par. 2 of the Universal Service Directive.

<sup>631</sup> Refer also to the ERG Common Position on SMP Remedies, 90 and 101.

<sup>632</sup> Waters, P., Yuen, A., *Operational Separation: A new Style of Regulation?*, [2006] CTLR 231.

towards moving away from regulation, requires abstention from regulation at retail level, if measures at wholesale level contribute to the creation of a competitive environment at retail level.

Nonetheless, in an oligopolistic context, the effects of collusive behaviour of oligopolists at wholesale level may be passed on to retail customers exclusively, despite the existence of other form of competitive pressure at retail level<sup>633</sup>. Under a speculative case where oligopolists in broadband access markets collude to gain high profits from the access rate, the high cost of access may be passed on to the retail customers directly, despite the existence of competition in terms of quality of service (e.g. more speed) or competition in terms of the retail margin only. In such case, price measures taken at retail directly may exert the desired pressure on wholesale rates, provided that the same players are active both at wholesale and retail level<sup>634</sup>. Notably, measures taken at retail may be capable of remedying anti-competitive practices at wholesale level, which means that there should be no absolute approach against intervention at retail level in oligopolistic situations. The same does not follow in monopolies, because measures taken at retail exclusively may result in margin squeeze practices from the part of the monopolist<sup>635</sup>. Hence, unlike monopolies, an absolute ban on measures at retail, unless the measures at wholesale have proved insufficient may not have the desired effect in an oligopolistic environment; more latitude may be given to NRAs to apply measures at retail in oligopolistic markets if the same players are active both at wholesale and retail level.

With the above in mind, the separate categories of measures will now be examined in turn.

---

<sup>633</sup> In Case SI/2009/0913 the Commission accepted that the existence of price competition at retail level does not preclude a finding of SMP at wholesale level in the Slovenian oligopolistic mobile access market.

<sup>634</sup> If different players are active at wholesale and retail level, the scenario may not occur, because wholesalers will not be affected by measures taken at retail or may embark on price squeezes.

<sup>635</sup> Price squeezes are discussed in detail under section 5.2.2.

## 5.2. Transparency and non-discrimination

### 5.2.1 Transparency

Transparency, in the sense applied in the SMP legal framework, is the obligation to make public specified information, such as prices and other accounting information, technical specifications, network characteristics, conditions for supply and use, prices etc<sup>636</sup>. The obligation to publish a ‘sufficiently unbundled reference offer’ on operators under the obligation not to discriminate in relation to interconnection and/or access<sup>637</sup> and the obligation of the NRAs to publish the minimum set of leased lines and associated standards in the Official Journal of the European Communities<sup>638</sup> are specific demonstrations of this principle.

The Access Directive leaves to the discretion of NRAs the precise information to be made available, the level of detail required and the manner of publication<sup>639</sup>. This applies in principle to the mandatory reference offer for operators entrusted with obligations to provide wholesale network infrastructure access, but the minimum content is set out in Annex II of the Access Directive. The minimum information includes details of the elements to which access (full or shared) is granted (physical entry to sites and technical information), details of support systems and of supply conditions, including standard terms and prices. Publication may be in paper or in electronic form, although preference is expressed to publication in the National Gazette<sup>640</sup>. The Directive leaves also the issue of associated charges open. However, for transparency to meet the purpose of its application, the information published should be easily accessible and clearly comparable.

Transparency is the least interventionist of all categories of measures and is usually considered complementary to the remaining categories of measures. The ERG had taken the view that the situations where transparency will be rendered an effective remedy by itself rather than helping identifying anti-competitive behaviour in wholesale markets to be remedied with the application of one or more of the remaining

---

<sup>636</sup> Article 9 par. 1 of the Access Directive.

<sup>637</sup> Article 9 par. 2 of the Access Directive.

<sup>638</sup> Article 18 par. 3 of the Universal Service Directive.

<sup>639</sup> Article 9 par. 3 of the Access Directive.

<sup>640</sup> Recital 22 of the Access Directive.

measures, will be scarce<sup>641</sup>. Indeed, the analysis of the underlying principles of the other categories of measures will show that transparency obligations are rather the means of controlling and implementing the other four categories of obligations on the SMP list of measures<sup>642</sup>.

The significance of transparency is depicted in the obligation imposed on all operators in retail markets of publicly available telephone services, irrespective of their market power, to make available transparent and up-to-date information on applicable tariffs and on standard terms and conditions to end-users and consumers<sup>643</sup>. In retail markets, similar transparency obligations would arise anyhow from the application of Community rules on consumer protection<sup>644</sup>. Economic theory suggests that transparency of retail prices may mitigate the excessive pricing problem to the extent that customers aware of prices of calls to individual networks can better adjust their demand in response to price increases following from the increase of termination rates<sup>645</sup>. In wholesale markets, transparency obligations arise only for SMPs.

Recital 16 in the preamble of the Access Directive quotes:

“Transparency of terms and conditions for access and interconnection, including prices, serve to speed-up negotiation, avoid disputes and give confidence to market players that a service is not being provided on discriminatory terms. Openness and transparency of technical interfaces can be particularly important in ensuring interoperability. ...”.

In a competitive environment, undertakings are willing to make their prices and terms of supply transparent in order to obtain a competitive advantage. This does not apply on markets exhibiting signs of ineffective competition, like the markets of the Recommendation, where players embarking on anti-competitive practices would like to find ways to conceal proof of the same.

---

<sup>641</sup> European Regulators Group, *Revised ERG Common Position on the Approach to Appropriate Remedies in the ECNS regulatory framework*, May 2006, (the ERG Common Position on SMP remedies), 48.

<sup>642</sup> It is noted that in none of the cases notified to the Commission under Article 7 of the Framework Directive have transparency obligations been imposed as an isolated measure in any wholesale market.

<sup>643</sup> Article 21 par. 1 of the Universal Service Directive.

<sup>644</sup> Directives 97/7/EC and 93/13/EC.

<sup>645</sup> Refer to the ERG Common Position on SMP remedies, 114.

In cases MT/2006/0443, IT/2007/0729 and SI/2008/806, the Maltese, Italian and Slovenian NRAs respectively included transparency obligations in the remedies notified to the Commission on the oligopolistic markets for mobile access and call origination and analogue broadcasting. The Commission did not comment on the suggested transparency measures<sup>646</sup>.

However, in oligopolistic markets, the situation is much more complex. We have seen in chapter 3 that an adequate degree of market transparency is determinative for the establishment of collective dominance, so that firms are able to monitor other firms' conducts and detect deviations. In this sense, transparency obligations create the risk of causing the opposite result of their intended purpose in oligopolistic environments, since they may enhance (and not hamper) collusion.

In *Nestle*<sup>647</sup> and in *Gencor*<sup>648</sup>, the Commission considered actions such as publication of price lists and production and sales statistics as enhancing market transparency. On this basis, it is doubted whether transparency obligations like publication of access rates are capable of bringing the desired outcome in the regulation of oligopolistic wholesale markets in electronic communications. The ERG had also expressed concerns on the effectiveness of transparency both at wholesale and retail level on the grounds that it is likely to further collusion rather than prevent it, as it allows the operators to observe each other's charges and thus makes cooperation easier<sup>649</sup>.

On the other hand, some degree of transparency may also prove necessary even in oligopolistic markets. That would be the case, e.g., of publication of information suitable to ascertain the level of excess capacity, since we have seen in chapter 3 that the existence of excess capacity operates detrimentally to the development of retaliation mechanisms which are necessary to establish collusion<sup>650</sup>. Also, transparency on some price information may prove useful in strengthening buyers' power, which is also a factor capable of preventing collusion.

---

<sup>646</sup> In SI/2008/806 the Commission challenged the designation of the second mobile operator as holder of SMP. The Slovenian NRA amended the notification and designated a single operator as susceptible of ex ante regulation.

<sup>647</sup> Case IV/M 190 *Nestle/ Perrier* [1992] OJ L365/1.

<sup>648</sup> Case T-102/96, *Gencor v. Commission* [1999] 4 CMLR 971

<sup>649</sup> The ERG Common Position on SMP remedies, 55 and 111.

<sup>650</sup> Refer also to Notification ES2005/0330 by the Spanish NRA, also discussed under section 3.2.2.2.

At the bottom line, NRAs should be cautious in the application of transparency obligations when regulating SMP in oligopolistic markets. A general obligation on transparency, if not defined properly, may reach the opposite result of its stated aim and facilitate instead of impede collusion. Transparency obligations should rather focus on issues that may bring factors capable of preventing collusion into light. This should be made clear in a future revision of the Access Directive or of the Guidelines.

### **5.2.2 Non-discrimination**

According to Article 10 par. 2 of the Access Directive,

“[o]bligations of non-discrimination shall ensure, in particular, that the operator applies equivalent conditions in equivalent circumstances to other undertakings providing equivalent services, and provides services and information to others under the same conditions and of the same quality as it provides for its own services, or those of its subsidiaries or partners”.

At wholesale level, the meaning of the obligation not to discriminate is that when the vertically integrated incumbents provide carriage of telecommunications services to their retail arms, they should do so on the same terms and conditions as for other operators<sup>651</sup>. The rationale behind this principle is that, this may ensure a level playing field at the retail level. At retail level, operators are required not to show undue preference to specific end-users.

Prohibition of discrimination on the price that products or services are offered to the various customers (price discrimination) is the most common form of discrimination in all industry sectors and is a controversial issue in competition law precedents. However, discrimination on other terms of supply may also discourage competitors from embarking on the service at issue or deprive end-users from the requested service on more favourable terms.

Economists generally define price discrimination as arising where a firm charges different price-cost margin on different transactions, typically to reflect different

---

<sup>651</sup> Refer also to rec. 17 of the Access Directive.

demand conditions, although such difference in demand conditions does not necessarily exist<sup>652</sup>. Scherer and Ross have defined price discrimination as the sale or purchase of different units of a good or service at price differentials not directly corresponding to differences in supply cost<sup>653</sup>. European competition law precedents have considered abusive price discrimination under different practices, such as volume discounts (application of discounted rates against the placing of big orders)<sup>654</sup>, sales growth rebates aiming at persuading customers to increase their purchases of the product<sup>655</sup>, discounts in return for exclusivity<sup>656</sup>, as well as discounts targeted against competing suppliers. All categories of customers involved in these types of discounts enjoy the privilege of a high elasticity of demand, affording them a higher negotiating power vis-à-vis the supplier. This leads the supplier to structure prices such as to earn higher price-cost margins on more secure sales, thus, discriminating to the detriment of the latter<sup>657</sup>.

In a dynamic context, price discrimination can have bad effects on welfare if it is used as an instrument for predatory pricing or other exclusionary practices that eliminate competition and thereby allow the price discriminating firm subsequently to raise price above competitive levels. The greater the market power of the firm, the more likely for price discrimination to cause distortions in competition. In downstream markets, price discrimination can also cause collateral distortions, particularly where the price-discriminating firm is the owner of a facility at the upstream level and also acts in the downstream market in competition with the customers of its upstream business<sup>658</sup>. This

---

<sup>652</sup> OFT Competition Act Guidelines, p. 414.

<sup>653</sup> Scherer, Ross, *Industrial Market Structure and Performance*, 3<sup>rd</sup> ed., 1990, 489.

<sup>654</sup> With the exception of short-term measures, discounts not related to genuine cost reductions in manufacturer's costs (price discrimination) have been held abusive in *Michelin*, Case C-322/81 *Michelin v. European Commission* [1983] ECR 3461; in *AKZO*, Case C-62/86 *AKZO v. European Commission* [1991] ECR I-3359, discounts targeting at competitors were also found to be abusive, to the extent that such discounts merely switch demand between one brand and another without generating overall welfare and market growth. According to the Commission Recommendation of 11.09.2013 C(2013) 5761 final, rec. 19, NRAs should accept volume discounts by SMP operators to their own downstream businesses, for example their retail arm, only if they do not exceed the highest volume discount offered in good faith to third party access seekers.

<sup>655</sup> In Case COMP/35.141, *Deutsche Post AG*, 2001. discounts aimed at securing customer loyalty, solely by reason of the method by which they are calculated, were considered to have an anti-competitive tying effect.

<sup>656</sup> Exclusivity discounts being used as an exclusionary device, particularly if associated with leverage effects, were criticised in Case C-85/76 *Hoffman La Roche v. European Commission* [1979] ECR 461.

<sup>657</sup> Muysert, P., *Price Discrimination – An Unreliable Indicator of Market Power*, [2004] ECLR., 351.

<sup>658</sup> Ridyard, D., *Exclusionary Pricing and Price Discrimination Abuses under Article 82 – An economic Analysis*, [2002] ECLR., 288.



is exactly the case of network operators discriminating in favour of their retail arms in wholesale access markets.

Price discrimination was identified in relation to termination charges imposed by the Dutch incumbent telecommunications operator Koninklijke KPN NV<sup>659</sup>. Following a complaint by MCI Worldcom, the Commission suspected KPN of abusing its dominant position regarding the termination of telephone calls on the KPN mobile network through discriminatory or otherwise unfair behaviour, on the grounds that fixed to mobile termination rates in Europe could be ten times higher than the average charge for fixed to fixed interconnection. Originally, WorldCom's complaint also concerned mobile operators in other EU countries, namely Sweden and Germany, but the complaint against Germany was withdrawn after the German operators reduced their termination rates by 50% and in Sweden the national competition authority started dealing with the issue<sup>660</sup>.

However, price discrimination has been found to commonly occur in competitive markets and that, in such markets, it is an acceptable method of increasing producer and consumer welfare. Schmalensee's analysis of price discrimination has shown that it can enhance both consumer and producer welfare (overall welfare) if it succeeds in increasing the sales and output levels of the firm, e.g. through extension into new market segments<sup>661</sup>. In this line, the CJEU and the General Court accept in principle that rebate schemes may be based on economically justified considerations (e.g. quantity efficiency gains, security in planning). A transaction-specific efficiency defence is acceptable, if the firm can show that the specific price discrimination practice gives rise to economies of scale for the customer<sup>662</sup>. An infringement of Article 82 occurs only in the absence of such justification for the rebate, as price discrimination is not a *per se* prohibition even if it is the conduct of a dominant firm<sup>663</sup>.

---

<sup>659</sup> IP/02/483, March 27, 2002.

<sup>660</sup> *Ibid.*

<sup>661</sup> Schmalensee, R., Output and Welfare Implications of Third Degree Price Discrimination, [1981] 71 American Economic Review, 242-247.

<sup>662</sup> Case T-203/01, *Michelin v. Commission*, judgement of September 30, 2003, par. 98-110, Case C-163/99, *Portugal v. Commission*, [2001] ECR I-2613.

<sup>663</sup> Glynn, D., *Article 82 and Price Discrimination in Patented Pharmaceuticals: the Economics*, [2005] ECLR 143.

It is observed that significant price discrimination characterises competitive industries with substantial fixed and common costs, such as telecoms, because:

- a) there are significant fixed and common costs to be covered, so high value customers are able to benefit from low value customers being offered prices below average cost but above marginal cost, spreading the fixed and common costs that need to be covered over more customers;
- b) there are identifiable customers, who are prepared to pay more than the marginal cost of the service, but relatively few of this group are prepared to pay the average cost; and
- c) serving the low value segment does not displace high value customers<sup>664</sup>.

In fixed cost recovery industries, customer loyalty is of increased significance, because even lower margin incremental sales can contribute crucially to overall profitability<sup>665</sup>. In this context, fixed cost recovery and low marginal costs have been argued as possible grounds for establishing legitimate reasons for price discrimination, even in the absence of underlying cost reductions, because they may generate market growth<sup>666</sup>:

“The fact that the price-cost margin on the incremental sale is less than the margin earned on some other sales of the same firm does not mean that the incremental sale is abusive, and nor does it prove that the infra-marginal sale was made at an excessive price. Such considerations are central to an understanding of the economics of fixed cost recovery industries”<sup>667</sup>.

With respect to wholesale access markets, the European Commission has reiterated in the Access Notice<sup>668</sup>, that market conditions may justify price and/or other forms of discrimination in the provision of access. Article 7 of Directive 97/33/EC (the Interconnection Directive), which is no longer in force, provided that

“different tariffs, terms and conditions for interconnection may be set for different categories of organisations which are authorised to provide networks and services, where such differences can be objectively justified on

---

<sup>664</sup> Muysert, P., *ibid.*, 353.

<sup>665</sup> Ridyard, R., *ibid.*, 293-294.

<sup>666</sup> Vickers, J., When is Discrimination Undue? in *Regulating Utilities: Understanding the Issues*.

<sup>667</sup> Ridyard, R., *ibid.*, 291.

<sup>668</sup> European Commission, *Notice on the application of the competition rules to access agreements in the telecommunications sector*, [1998] OJ C 265/02, par. 120-128.

the basis of the type of interconnection provided and/or the relevant licensing conditions ...”.

A similar provision was not included in the Access Directive, but this omission should by no means be construed to mean that such “rule of reason” approach to discrimination does not apply in the imposition of non-discrimination obligations on SMPs, pursuant to the Access Directive<sup>669</sup>. Also, price differentials to the benefit of less privileged retail customers finds wide support and is explicitly provided in the Universal Service Directive<sup>670</sup>.

Practical difficulties are inherent in assessing the threshold for establishing abusive behaviour in price discrimination. The European Commission has put forward some kind of average variable cost as a workable proxy for marginal costs or of avoidable cost test, which assesses whether the revenues earned by the firm in question are sufficient to cover the costs that the firm would be able to avoid or save if it chose not to offer that product<sup>671</sup>. But, pricing above avoidable cost can still have adverse effects on competition, e.g. in a situation where the lowering of prices on legitimate grounds (lower costs) may lead to considerable future price increases, when competitors have been driven out of the market for reasons of own inefficiencies<sup>672</sup>.

Another practical problem in the application of non-discrimination is that its scope covers the firm’s internal purposes. This is particularly relevant in dealing with forms of discrimination other than price. Some scholars have adopted a more pragmatic view towards the principle of non-discrimination arguing that it will work only if there is genuine separation of decision-making between the up-stream and down-stream

---

<sup>669</sup> We should not forget that the protection of competitors is not an end in itself, but an aim contributing to consumer welfare. Refer also to Kallaughner, J., Sher, B., *Rebates Revisited: Anti-competitive Effects and Exclusionary Abuse under Article 82*, [2004] ECLR, 263-285, who claim that European case-law has placed too much emphasis in protecting competitors without much impact on consumer welfare.

<sup>670</sup> For example refer to Article 7 of the USO Directive.

<sup>671</sup> Refer to Case C-62/86, *AKZO Chemie BV v. Commission* [1993] 5 CMLR. Ridyard maintains that the avoidable cost test is more versatile than the average variable cost test, because it can be carried out across various dimensions of a dominant firm’s conduct (e.g. it may be related to an individual product or an individual customer), *ibid.*, 295.

<sup>672</sup> Kahn, A., Comments on exclusionary airline policy, [1999] 5 Journal of Transport Management.

operations, to be able to ignore incentives that maximise the overall profitability of the group<sup>673</sup>.

Discrimination in contexts other than price may relate to elements such as delays, technical access, routing, numbering, restrictions on network use and use of customer network data<sup>674</sup>. Examples of discriminatory behaviour with respect to wholesale electronic communications markets are listed below:

- failure to offer non-discriminatory collocation
- discrimination in the provisioning of conduit space and access to poles
- failure to provide non-discriminatory access to operational support services for order processing and other functions
- problems provisioning competitor orders for local number portability
- failure to include the directory listings of competitor customers in directory listings databases at the same level of accuracy, timeliness and reliability as it provides to its own customers.

The Access Notice placed particular weight on discrimination that may arise in respect of the technical configuration of the access and, specifically, in respect of the degree of technical sophistication of the access and/or the number and/or location of connection points<sup>675</sup>. In the event of discrimination, the access-seeker may be forced to incur additional expenses by either providing links at a greater distance from its own switching centre or being liable to pay higher conveyance charges or it may end up with reduced technical capabilities compared with the incumbent's network.

In its sector inquiry into local loop unbundling, the Commission detected discriminatory behaviour resulting from the fact that incumbents are often vertically integrated providing both wholesale input and retail products<sup>676</sup>. Regulation 2887/2000 on unbundled access to the local loop provided for a direct obligation on SMPs in the provision of fixed public telephone networks and services to

---

<sup>673</sup> Ridyard, D., *Essential Facilities and the Obligation to Supply Competitors under UK and EC Competition Law*, [1996] ECLR, 450.

<sup>674</sup> Par. 125 of the Access Notice.

<sup>675</sup> Par. 127 of the Access Notice.

<sup>676</sup> Commission press release IP/02/849 of June 12, 2002.

“provide beneficiaries with facilities equivalent to those provided for their own services or to their associated companies and with same conditions and time-scales”<sup>677</sup>.

The significance of the principle was underlined by the Committee on Industry, External Trade, Research and Energy in its 1<sup>st</sup> report on the Commission proposal for the Access Directive<sup>678</sup>. The Committee suggested that the non-discrimination obligation automatically applies to undertakings designated as SMPs in the relevant market:

“The NRAs should oblige all operators to respect the non-discrimination principle, because it is the only way to create a real competitive market. Indeed, several operators could slow down the establishing of real competition in the telecommunication market by delivering to new operators worse services than they provide for their own services, or those of their subsidiaries or partners”.

Like transparency, the ERG had considered non-discrimination as a complementary obligation in the frame of obligations imposed on SMPs<sup>679</sup>. In the majority of notified measures to the Commission, access obligations are complemented by non-discrimination obligations<sup>680</sup>. Non-discrimination obligations have been also imposed by NRAs on SMPs in oligopolistic markets<sup>681</sup>.

However, the foregoing analysis demonstrates that non-discrimination obligations entail complexities in their application. Such complexities include the disclosure of information necessary to establish the threshold for the imposition of non-discrimination obligations in relation to price and other sensitive information of internal decision-making processes, capable of establishing efficiency-defence for the SMP operator. On 11.09.2013, the Commission issued its Recommendation of 11.9.2013 on consistent non-discrimination obligations and costing methodologies to

---

<sup>677</sup> Article 3 par. 2 of Regulation 2887/2000.

<sup>678</sup> Document A5-0061/2001 Final, Amendment 36. The amendment was not accepted by the Commission, though no reasons for the rejection are expressed in the in the amended proposal.

<sup>679</sup> The ERG Common Position on SMP remedies, 49.

<sup>680</sup> E.g. out of 2009 cases refer to BG/2009/0911-0912, CZ/2009/0964, EE/2009/0942-0943, FI/2009/0900, DE/2009/0947-0948, EL/2009/0934-0935, MT/2009/0979.

<sup>681</sup> Cases IE/2004/121, MT/2006/0443, IT/2007/0729 and SI/2008/806.

promote competition and enhance the broadband investment environment<sup>682</sup>, having observed considerable variations in the application of the non-discrimination obligation across the Union with regard to the scope, the application, compliance monitoring and enforcement of this obligation, in particular with regards to the equivalence model chosen (if one is applied at all), even where the underlying market problems are comparable<sup>683</sup>.

In the Recommendation, the Commission designates ‘equivalence of input’ (EoI)<sup>684</sup> as the surest way to achieve effective non-discrimination, since it ensures a level playing field between the SMP operator’s downstream businesses and third-party access seekers, and promotes competition, if such obligation is appropriate, proportionate and justified. Where the provision of wholesale inputs on an EoI basis is disproportionate, as a result of high compliance costs, NRAs should ensure that the SMP operator provides the wholesale inputs to access seekers on an ‘equivalence of output’ (EoO) basis<sup>685</sup>. In addition, NRAs should require SMP operators subject to a non-discrimination obligation to provide access seekers with regulated wholesale inputs that allow the access seeker to effectively replicate technically new retail offers of the downstream retail arm of the SMP operator, in particular where EoI is not fully implemented. The Commission also recommends the use of KPIs, complemented by SLAs and SLGs, as the most appropriate tools to detect potential discriminatory behaviour and enhance transparency with respect to the delivery and quality of the SMP operator’s regulated wholesale access products in the relevant markets taking into account the time requirements set out in Annex I.

It is, thus obvious, that transparency becomes a *de facto* condition precedent for the application of non-discrimination obligations, possibly also on issues that may be

---

<sup>682</sup> C(2013) 5761 final.

<sup>683</sup> Recital 6 of the Recommendation.

<sup>684</sup> According to par. 6 (g), ‘Equivalence of Inputs (EoI)’ means the provision of services and information to internal and third-party access seekers on the same terms and conditions, including price and quality of service levels, within the same time scales using the same systems and processes, and with the same degree of reliability and performance. EoI as defined here may apply to the access products and associated and ancillary services necessary for providing the ‘wholesale inputs’ to internal and third-party access seekers.

<sup>685</sup> According to par. 6 (h) of the Recommendation, ‘Equivalence of Output (EoO)’ means the provision to access seekers of wholesale inputs comparable, in terms of functionality and price, to those the SMP operator provides internally to its own downstream businesses albeit using potentially different systems and processes.

capable of advancing collusive practices, thus impairing the efficiency of this measure on oligopolistic markets for the reasons set out in the previous sub-section<sup>686</sup>. Further, non discrimination obligations enhance stability and similarity in cost structures, but we have seen in Chapter 3 that similarity in cost structures is also considered a factor inductive to tacit collusion, as it entails a strong possibility of the undertakings having similar points of view on the prices that would like to see prevailing on the market. The imposition of obligations of non discrimination in relation to pricing issues aim at combating differences in profitability margins by the SMPs, which, in turn, may bring profitability margins of the operators closer, as well as the operators themselves.

Moreover, there may be efficiency defences that would allow the SMP operator to challenge the obligation not to discriminate. It is easier for SMP operators to plead efficiency defences in oligopolistic markets, since a transaction-specific efficiency defence finds more ground in a complex oligopolistic environment with no monopoly equilibrium, as opposed to a market environment dominated by the former incumbent. On an oligopolistic market, the granting of rebates to customers, discriminatory pricing or selective price-cutting by one of the undertakings may mean that price competition is in fact operating between the oligopolists<sup>687</sup>. This will probably be the result of the strong buyer power exercised by specific customers, which has a negative impact on the sustainability of tacit collusion<sup>688</sup>.

On the other hand, in oligopolistic access markets exhibiting characteristics of collusive behaviour, the collusive access price may already be non discriminatory. In such cases welfare can be potentially increased by bringing prices back to a cost-oriented level, not by imposing obligations not to discriminate. The ERG accepted that non discrimination obligations can facilitate collusion among operators<sup>689</sup>, whereas we have also seen in section 4.2.1 that under the International Roaming Inquiry GSM operators were found to interpret the non discrimination obligation so absolutely that they offered only the most trivial discounts on Inter-operator Tariffs (IOTs), which

---

<sup>686</sup> Refer also to the ERG Common Position on SMP remedies, 111, where it is stated that transparency and non-discrimination at retail level have the tendency of creating collusive practices between market players, thus leading to the opposite results in relation to anti-competitive practices.

<sup>687</sup> Jones, A., Suffrin, B., *EC Competition Law*, 2<sup>nd</sup> edition, 2005, OUP, 840.

<sup>688</sup> Refer to section 3.2.3.3.

<sup>689</sup> The ERG Common Position on SMP remedies, 43.

established instance of collusion, because in a properly functioning market, a large or an expanding buyer should be able to negotiate a better price<sup>690</sup>.

Like transparency, non discrimination obligations should be applied with caution in oligopolistic markets and focus on issues that may be capable of preventing collusion, depending on the particulars of each case<sup>691</sup>. This should be made clear in a future revision of the Guidelines.

### **5.3. Separating accounts and functions**

#### **5.3.1 Accounting Separation**

The purpose of accounting separation is to provide a financial picture for each part of the integrated business which reflects as closely as possible how it would have performed if it had operated as a separate business, because the regulator is able to review if the internal transactions are taking place on terms similar to transactions between the company and competitors<sup>692</sup>. Accounting separation, as provided in Article 11 of the Access Directive, should make transparent the internal transfer prices to the regulated firm's own downstream operation in order to ensure compliance with a non-discrimination obligation or to prevent unfair cross-subsidies<sup>693</sup>. Unfair cross-subsidy would occur where an unjustifiably low price in one product market is facilitated by excessive charges in another product market.

However, the separation of costs is not a straightforward exercise. In multi-product firms, such as telecommunication firms, judgements as to how joint or common costs are to be apportioned between activities are inevitably arbitrary in nature<sup>694</sup>. More specifically, the difficulties encountered in the preparation of separate accounts for

---

<sup>690</sup> Sutherland, E., *International Roaming and Competition Law*, [2001] CTLR, 146.

<sup>691</sup> The Commission has matched non-discrimination obligations with single SMP and this is shown in recital 21 of the Recommendation on Non-discrimination obligation, which quotes: 'When carrying out the technical replicability test or assessing the results of the test carried out by the SMP operator, NRAs should also take into account the risk of monopolisation of the downstream market through the new offer and the impact on innovation'.

<sup>692</sup> Commission Recommendation 98/322/EC of April 8, 1998 on interconnection in a liberalised telecommunications market, [1998] OJ L141/6, par. 1.

<sup>693</sup> The ERG Common Position on SMP remedies, 41.

<sup>694</sup> Ryan, M., *Structural Separation: A Prerequisite for Effective Telecoms Competition?*, [2003] ECLR, 248



integrated telecommunications operators are at large caused by the fact that much of the relevant plant is used in common in the provision of a number of services and much of the relevant personnel supports more than a single service. The situation is more difficult with corporate costs, the so-called head office overheads, including executive, legal, finance and other general functions<sup>695</sup>. The cost accounting model that BT published in 2004 provided that 15% of BT's fixed assets referred to corporate costs, which could only be allocated by apportionment, as opposed to direct allocation<sup>696</sup>. Additional challenges occur in deciding how to apportion the costs of common infrastructure between individual services, which is endemic in telecommunications operations<sup>697</sup>.

There is a variety of different methods that may be adopted to attribute overhead costs to business activities, the most common being the application of a mark-up calculated as a percentage from the operations of the past years (a percentage that overheads represent on the total business of the company). Of course, such methods do not isolate costs due to inefficiencies of the operator, which raises the issue of whether competitors should be called to pay for the part of such costs that may be attributed to prices charged for services provided to them.

In that respect, the choice of proper regulatory accounting principles and systems becomes of crucial importance for the effective application of accounting separation. Economists have recognised that the choice of an accounting system may depend on the result that the firm wants to present, namely the method of apportionment may be driven by the costs that the firm wants to show as attributed to specific activities. Billing provides a representative example of this case. If an operator uses as allocator relative volumes of traffic, this results in a larger apportionment of costs to relatively high-priced services, such as international direct dialled calls; whereas in the event of billing per minutes of traffic, this results in higher costs being apportioned to local calls, where traffic volumes are high, but prices relatively low<sup>698</sup>.

---

<sup>695</sup> *Ibid* at footnote 23.

<sup>696</sup> BT, *Primary Accounting Documents*, November 2004, section 2.3.3.3.

<sup>697</sup> Waters, P., Yuen, A., *ibid.*, 237.

<sup>698</sup> *Ibid*. In the first set of separate financial accounts that BT released in October 1995, it was suggested that access and apparatus supply were provided at a loss, whereas local, national and international calls generated more than double the access deficit.

The Commission has always viewed favourably accounting separation as a measure against exploitative behaviour in telecoms. Directive 96/19/EC<sup>699</sup> had already required putting a system of separate accounts for operator services in place in view of the liberalisation of voice telephony services in 1998. Accounting separation was also considered a useful tool for the implementation of interconnection obligations, with particular regard to the principles of transparency and cost-orientation<sup>700</sup>.

Under the current framework, accounting separation may be imposed both at wholesale and at retail level. The USO Directive does not include specific guidance on the implementation of such obligations other than the general principles of reasonableness, proportionality etc., of Article 17 of the USO Directive. Article 11 of the Access Directive places the following limitations with respect to the application of accounting separation as a measure against SMP at wholesale level: accounting separation may be imposed a) in relation to *specified* activities related to interconnection and/or access; and b) the obligation may be placed on *vertically* integrated companies only.

Accounting separation has been regarded as the only efficient and practical means of achieving the requirements of non-discrimination and transparency<sup>701</sup>. Without accounting separation, the principles of non-discrimination and transparency run the risk of remaining aspirations, as the only credible way of ascertaining whether the correct costs are being applied respectively to wholesale and retail products is through accounting separation<sup>702</sup>. In this line of thinking, the ERG have viewed the separation of the company's business accounts more as a measure complementing transparency

---

<sup>699</sup> Article 8 of Commission Directive 96/19/EC amending Directive 90/388/EEC with regard to the implementation of full competition in telecommunications markets, [1996] OJ L74.

<sup>700</sup> Recital 11 and Articles 7 and 8 of Directive 97/33/EC.

<sup>701</sup> Tarrant, A., *Accounting Separation: The Hole in the Heart of the EU Telecommunications Regime*, [2003] ECLR., 273-274. He also argues that benchmarking exercises demonstrate that prices for some typical wholesale products are often 50 to 100 per cent higher in the member-states that do not appear to have implemented accounting separation than in the UK and Ireland where accounting separation is applied.

<sup>702</sup> The accounting information that NRAs may require under Article 9 par. 1 of the Access Directive is not tantamount to the imposition of specific accounting format and methodology pursuant to Article 11 par. 1 of the same Directive. Similarly, the imposition of specific accounting format and methodology for the application of accounting separation is different and less strict than the cost accounting obligations that may be imposed pursuant to Article 13 par. 1 of the Access Directive. These are discussed in chapter 5.

and non-discrimination obligations<sup>703</sup> or price controls<sup>704</sup> rather than a measure in itself. Indeed, in the majority of accounting separation measures notified under Article 7 of the Framework Directive, the respective notifications included obligations on transparency, non discrimination and pricing obligations<sup>705</sup>. This means that transparency, non-discrimination and accounting separation obligations are essentially one and the same measure, since the latter forms the means of ensuring application of the former.

The direct association of accounting separation with the obligations on transparency and non-discrimination suggests that problems similar to that identified in relation to transparency and non-discrimination also apply in this area regarding co-ordinated effects and the possible promotion or facilitation of tacit collusion<sup>706</sup>. Information required for accounting separation purposes may not be available in the normal course of business operations through the use of the more general Article 5 of the Framework Directive obliging undertakings to provide NRAs with the financial information necessary to ensure conformity with the provisions of the Directive; this means that through the imposition of obligations on accounting separation, if the relevant accounting details are publicly disclosed, the exchange of business information may be facilitated and, consequently, the sustainability of a common position towards competitors and consumers.

According to Article 11 of the Access Directive, the publication of the relevant information is not mandatory, but rather an option for the NRAs that decide to apply obligations on accounting separation:

“National regulatory authorities may publish such information as would contribute to an open and competitive market, while respecting national and Community rules on commercial confidentiality”.

---

<sup>703</sup> The ERG Common Position on SMP remedies, 41, 48, 49, 52 etc.

<sup>704</sup> *Ibid.*, 14.

<sup>705</sup> Indicative reference is made to the following recent cases: FR/2010/1050, IT/2009/1025- 1027, PL/2010/1056, FR/2010/1094, RO/2010/1101-02, IE/2010/1104, AT/2010/1107, DK/2010/1099, LT/2009/1022, SE/2010/1032, EE/2010/1038, LV/2010/1043-1044, AT/2010/1046-1048, SE/2010/1061-1062, CZ/2010/1070, EL/2010/1072, 1074, CY/2010/1076, UK/2010/1062, DK/2010/1023. In CZ/2010/1037, accounting separation was imposed together with access obligations on carrier selection and pre-selection.

<sup>706</sup> The ERG Common Position on SMP remedies, 44.

On the other hand, Article 15 par. 1 of the Access Directive quotes:

“Member States shall ensure that the specific obligations imposed on undertakings under this Directive are published and that the specific product/service and geographical markets are identified. They shall ensure that up-to-date information, provided that the information is not confidential and, in particular, does not comprise business secrets, is made publicly available in a manner that guarantees all interested parties easy access to that information”.

And recital 13 of the Framework Directive:

“Information gathered by national regulatory authorities should be publicly available, except in so far as it is confidential in accordance with national rules on public access to information and subject to Community and national law on business confidentiality”.

The foregoing provisions of Article 15 par. 1 of the Access Directive and the recital 13 of the Framework Directive should not be interpreted as negating the option of NRAs not to disclose information collected through the application of accounting separation obligations save as to the personnel of NRAs, acting under strict confidentiality duties. In fact, such option is valuable for oligopolistic markets, since the revelation of business processes, efficiencies and strategies to competitors can be mitigated by appropriate control of information<sup>707</sup>. In oligopolistic markets, should NRAs decide to apply accounting separation obligations on operators for the control of transparency and/or pricing obligations, the publication of the relevant information should be avoided, in order to mitigate the downsides of accounting separation in oligopolistic environments, notably the risk of enhancing collusion between market players.

In Cases IE/2004/121, MT/2006/0443 and IT/2007/0729, the Irish, Maltese and Italian NRAs imposed obligations of accounting separation on the entities designated as holding SMP in the oligopolistic markets for mobile access and call origination and analogue broadcasting, but the non- confidential version of the relevant notifications does not provide information on whether the relevant data were made public or not. The Commission did not express any concern as to the suitability of the relevant

---

<sup>707</sup> *Ibid.*

measure (nor to its publication or not), which shows the similar treatment of monopolistic and oligopolistic situations despite the differences between the two.

### 5.3.2 Functional Separation

The degree of uncertainty and arbitrariness entailed in the application of proper accounting methods for implementing accounting separation have led some to question the meaningfulness of the results generated by cost separation processes and, as a consequence, the degree of protection which costing can provide against anti-competitive pricing of access facilities<sup>708</sup>. The failure of costing as a mechanism for preventing cross-subsidisation of the competitive long-distance business of Bell Operating Company by its monopoly local revenues is said to be one of the reasons for its breaking-up into AT&T and Regional Bell Companies<sup>709</sup>.

Structural (or functional) separation was not included in the original list of measures of the Access Directive and was added as a new measure on the list by virtue of Directive 2009/140/EC. Structural separation commonly involves the spinning off of a business, formerly part of a larger integrated whole, into a separate legal operating entity<sup>710</sup>. Structurally separated businesses remaining under ownership of the same entity, are to be distinguished from divested, separately owned entities.

Advocates of the structural separation argue that conventional regulatory approaches address specific occurrences of abusive behaviour, but do nothing to remove the incentive to repeat similar behaviour in the future<sup>711</sup>. The benefit of this measure lies mainly in the potential for the divested entity to act independently from its former integrated whole, develop its own marketing policy and promote its services in the industry with the prospect of widening its target client group, which would not necessarily comprise solely of its mother company. Structural separation has also been

---

<sup>708</sup> Ryan, M., *BT's Separate Accounts*, [1996] 4 CTLR, 146.

<sup>709</sup> *Ibid.*, 148.

<sup>710</sup> Solomon, J., Walker, D., *ibid.*, 86.

<sup>711</sup> Ryan, M., *Structural Separation: A Prerequisite for Effective Telecoms Competition?*, [2003] ECLR, 245. Unbundling and accounting separation have been suggested as alternatives to structural separation. In the US, other alternatives have referred to behavioural regulation, such as codes of conduct prescribing the behaviour of the incumbent in sensitive areas (non-discrimination against competitors, no cross-subsidisation, no unfair or deceptive advertising or marketing, etc.). Pennsylvania PUC, *Proposed Rulemaking*, L-00990141, November 30, 2001, 32 Pa.B. 1986, in Ryan, *ibid.*, 246-249.

supported by those who believe that there is little point in duplicating infrastructure, particularly in a broadband environment with excess capacity over existing networks<sup>712</sup>.

The hesitation of regulatory authorities to adopt structural remedies is usually attributed a) to the risk of welfare losses outweighing any gains flowing from increased competition, as a result of abolishing the economies of scale and scope associated with the integration of services and b) to the concern that the remaining set of functions will not operate as incentive to innovate<sup>713</sup>. In October 2005, the Commission published a study on remedies which evaluated the effectiveness of remedies adopted in merger decisions in the period 1996 – 2000. The study challenged the preference of the Remedies Notice<sup>714</sup> to divestiture commitments because of the various practical problems entailed in structural separation (insufficiently defined scope of the divested business, which was usually confined in the parties' overlapping activities, unsuitability of the purchaser, deterioration of the divested package during the divestiture process)<sup>715</sup>.

In fact, heavy investment requirements in broadband networks have been used as an argument in favour of vertical integration and in favour of relaxed views on dominant positions, including prevention of legal separation of networks under the competition rules<sup>716</sup>. It is reported that Australia's Productivity Commission had rejected structural and operational separation models for Telstra, because the transaction costs involved in its separation would be too large and would be disproportional to any potential benefits of any such separation<sup>717</sup>.

Operational separation makes the fundamental problems of accounting separation in network industries and telecoms in particular worse, as the concept of notionally dividing assets that cannot physically be divided or separated requires a 'duct-tapping'

---

<sup>712</sup> Solomon, J., Walker, D., *ibid.*, 88.

<sup>713</sup> Ryan, M., *ibid.* at footnote 147, 242.

<sup>714</sup> Commission Notice on Remedies Acceptable under Council Regulation (EEC) 4064/89 and under Commission Regulation (EC) 447/98, [2001] OJ C68/3.

<sup>715</sup> DG Competition, Merger Remedy Study, October 2005, available at [http://europa.eu.int/comm/competition/mergers/others/remedies\\_study.pdf](http://europa.eu.int/comm/competition/mergers/others/remedies_study.pdf), (the Remedies Study).

<sup>716</sup> Sauter, W., Telecommunications: The Consultation on EU Regulation for Convergence, (1999) 1 Util. LawRev., 4-5.

<sup>717</sup> Waters, P., Yuen, A., *ibid.*, 233.

solution, where notional physical lines are drawn through common assets. The end result is that a complex mechanism for internal transfer pricing will need to be developed<sup>718</sup>.

The European Commission had adopted a pro-structural separation approach between telecommunication and cable TV networks in Directive 1999/64/EC<sup>719</sup>, by imposing the structural separation of telecommunication and cable TV networks for dominant undertakings. However, the reasons brought forward for applying such measures were slightly different from the arguments described above. In particular, in the Cable Review, issued by the Commission shortly before drafting the Directive, it was explained that cable-TV operators had no incentive to upgrade their networks, which could be used for unilateral communications with the users, to provide bi-directional operations, such as voice telephony<sup>720</sup>. In addition, the Commission saw further restrictions in the fact that access to the local loop with regard to both networks was controlled by the same operator. In justifying this context, the Commission referred to the reduction of BT's market share in the local loop after the arrival of cable companies, which was more effective than the entry of Mercury as a new competitor<sup>721</sup>.

It also identified in the preamble of the Directive that the accounting separation of the same networks, which was previously imposed by Directive 95/51/EC<sup>722</sup>

“has not provided the necessary safeguards against all forms of anti-competitive behaviour [...] in situations where serious conflicts of interest exist as a result of joint ownership”.

Commentators have supported this choice on the grounds that a non-profitable operation of non-upgraded cable-TV networks becomes particularly obvious with legal separation, whereas full profits and losses of either network operation do not become

---

<sup>718</sup> Waters, P., Yuen, A., *ibid.*

<sup>719</sup> Commission Directive 1999/64/EC of 23 June 1999 amending Directive 90/388/EEC in order to ensure that telecommunication networks and cable TV networks owned by a single operator are separate legal entities, OJ L175/39.

<sup>720</sup> Commission Communication concerning the review under competition rules of the joint provision of telecommunications and cable TV networks by a single operator and the abolition of restrictions on the provision of cable TV capacity over telecommunications networks, [1998] OJ C71/4, par. 31.

<sup>721</sup> *Ibid.*, par. 34.

<sup>722</sup> Commission Directive 95/51/EC of 26.10.1995, OJ L256/49.

apparent with mere accounting separation<sup>723</sup>. It is noteworthy that in the Cable Review, the Commission had even suggested divestment of cable TV networks in the light of special circumstances<sup>724</sup>.

In September 2007, two months before the launching of the proposals for the revised telecommunications framework, the Commission published its proposals for the reform of the energy market, later passed as Directive 2009/72/EC<sup>725</sup>, including the separation of generation and supply activities of undertakings active in energy markets.

In the revised 2009 Access Directive<sup>726</sup>, the Commission added functional separation in the list of measures that NRAs may apply on vertically integrated telecommunication operators in the frame of SMP regulation on wholesale markets and allowed voluntary separation of networks and services in the model adopted a couple of years earlier by BT. In view of the principle of proportionality and the significant downsides entailed in the separation of business entities, Article 13a of the Access Directive explains that the application of functional separation should be regarded as a measure of last resort:

‘Where the national regulatory authority concludes that the appropriate obligations imposed under Articles 9 to 13 have failed to achieve effective competition and that there are important and persisting competition problems and/or market failures identified in relation to the wholesale provision of certain access product markets, it may, as an exceptional measure, in accordance with the provisions of the second subparagraph of Article 8(3), impose an obligation on vertically integrated undertakings to place activities related to the wholesale provision of relevant access products in an independently operating business entity.

That business entity shall supply access products and services to all undertakings, including to other business entities within the parent company,

---

<sup>723</sup> Bartosch, A., *E.C. Telecommunications Law: The New Draft Directive on the Legal Separation of Networks*, [1998] ECLR, 519.

<sup>724</sup> Par. 68. This view has been supported also in jurisprudence, e.g. refer to Mc Callum, Linsey, *EC Competition Law and Digital Pay Television*, [1999] 1 Competition Policy Newsletter, 10-11.

<sup>725</sup> Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market on electricity repealing Directive 2003/54/EC, OJ L211/55.

<sup>726</sup> Article 13a of the Access Directive.



on the same timescales, terms and conditions, including those relating to price and service levels, and by means of the same systems and processes’.

Functional separation requires the separation of network infrastructure from the units offering services on top of this infrastructure with the overall ownership remaining unchanged, despite the creation of operationally separate business entities. Functional separation is claimed to fuel competition and at the same time strengthen incentives for the operator and for new entrants to invest in networks and services<sup>727</sup>. In order to avoid distortions of competition in the internal market, proposals for functional separation must be approved in advance by the Commission<sup>728</sup>.

Until 2005, the typical paradigm of structural separation in the telecommunications sector for regulatory purposes was the structural separation of the local operating units of AT & T in the US into what were known as the regional Bell operating companies<sup>729</sup>. On 22 September 2005, BT announced the structural separation of its networks and services. The decision came as no surprise to many, who had predicted such solution as the only way-out from the unenforceable ‘equivalence’ principle imposed by Ofcom with its 2004 telecommunications review, instructing the ‘operational separation’ of BT<sup>730</sup>. Ofcom proposed to roll back regulation at retail level and to offer a way of avoiding a forced separation of the company’s retail and wholesale divisions, if BT achieved securing ‘equivalence’ between its retail arm and other access-seekers, which would be implemented through the operational separation of BT’s networks and services. ‘Equivalence’ would be enforced by making a presumption of undue discrimination if the main features other than price of a regulated product (the ‘non-price transaction conditions’) are not identical to the product used by BT’s own downstream operations. In effect, Ofcom wished partially to reverse the burden of proof; BT would have to show that the non-price differences were justified.

---

<sup>727</sup> Recital 61 of Directive 2009/140/EC.

<sup>728</sup> *Ibid.*

<sup>729</sup> On January 1, 1984 the Bell System ceased to exist. Twenty-two Bell Operating Companies were combined to form seven Regional Bell Operating Companies (which later merged to leave just four); and a new AT&T that retained its long distance, manufacturing, and research operations. The break-up was the result of the landmark antitrust case *United States v. AT&T*, 552 F. Supp. 131 (DDC 1982).

<sup>730</sup> Issued November 18, 2004, available at : [www.ofcom.org.uk/consultations/current/telecoms\\_p2/](http://www.ofcom.org.uk/consultations/current/telecoms_p2/).

This change was designed to create positive incentives for BT for the development of workable wholesale products. In this way competitors would not only buy wholesale products under the same terms and conditions as BT's retail arm, but they would also influence over the development and deployment of such products and BT retail obtains no advantage at the retail level from being associated with BT wholesale, including benefits from sharing a brand<sup>731</sup>.

BT would create a separate body (the 'Access Services Division'), which would control and maintain both the local loop and backhaul duct and fibre assets. A very large number of BT staff would be employed in this organisation, which would have a new brand, and would be operationally separate from the rest of BT. The structure was designed to remove the incentives for BT to exploit its control of these assets, but from the very beginning the measure was considered as forcing BT's structural separation. The separation was welcomed by BT's competitors at service level who have long complained that the company was hindering competition by maintaining its stranglehold on the local loop. According to the European Commission, when BT's business was separated in 2005 only 105,000 unbundled access lines existed, and in two years, the number grew to 3 million<sup>732</sup>. However, reference is also made to the high costs of the restructuring, which were estimated to exceed 200 million BP for upgrading the IT systems only<sup>733</sup>.

Voluntary structural separation, in compliance with BT's paradigm, has been favoured by scholars as a way-out from the dual regime subjecting only some activities to regulation, because it limits the scope of economic activity which is subject to regulation and creates more certainty<sup>734</sup> and was ultimately endorsed under Article

---

<sup>731</sup> For a summary of the debate around the viability of the proposed regulation refer to Richardson, T., *BT faces life changing three months*, 22 November 2004, [www.register.com](http://www.register.com). The fact that BT Wholesale and BT retail continue to be part of the same legal and economic entity inevitably put such ambitious plan into question, not only because of the pragmatic difficulties inhered in the associated economies of scale and scope (which are precisely aiming at creating benefits for the associated undertakings), but also because of the psychological effects created by the reality of belonging to same group and the incentives to maximise its overall profitability.

<sup>732</sup> European Commission, 2007 Telecoms Reform No. 2, November 2007, <http://ec.europa.eu/comm>.

<sup>733</sup> Refer to [www.guardian.co.uk/business/story/0,3604,1576402100.html](http://www.guardian.co.uk/business/story/0,3604,1576402100.html), [www.theregister.co.uk/2004/11/18/ofcom\\_ukif\\_review](http://www.theregister.co.uk/2004/11/18/ofcom_ukif_review), [www.theregister.co.uk/2004/11/18/review\\_ofcom](http://www.theregister.co.uk/2004/11/18/review_ofcom), [www.theregister.co.uk/2004/11/22/bt\\_telecom\\_review](http://www.theregister.co.uk/2004/11/22/bt_telecom_review).

<sup>734</sup> Lehr, W., Hubbard, G., Economic case for voluntary structural separation, at <http://itc.mit.edu/itel/docs/2003/struct-separation.pdf>. Also, Salerno, F., *Neutral Networks: The Paradox of Unbundling in the European Regulation of Energy and Telecommunications*, [2008] ECLR 471-479.

13(b) of the revised Access Directive. It is reported that BT's main motivation for the separation of its networks and services operations was the desire for more certainty in terms of costs of capital and returns prior to investing in next generation networks (NGNs)<sup>735</sup>.

The background to the adoption of functional separation obligations shows that the measure was primarily intended to regulate the business of former incumbents. This is corroborated by the main examples of such forms of business separation in the telecommunications sector, notably AT&T and BT. Also, in 1999, when the Pennsylvania Public Utility Commission mandated structural separation of the incumbent Verizon, it considered structural separation as the most efficient tool to ensure local telephone competition where a large incumbent monopoly controls the market<sup>736</sup>.

In addition, as set out in the previous paragraphs, according to the Commission in the Cable Review, structural separation of cable and telecom networks was suggested as a remedy to restrictions stemming from the fact that access to the local loop with regard to both networks was controlled by the same operator. It is also noted that structural separation was adopted as an additional measure at a time when a lot was being discussed at European Commission level on the effective separation of distribution networks from the activities of generation and supply, notably of activities of incumbent operators on national electricity markets<sup>737</sup>. This observation also shows that structural separation is mainly intended to apply on monopolistic situations.

This approach remains unaltered under the revised framework. The Commission itself has justified the endorsement of functional separation as a new measure with the ability to assist against unfair discrimination of new entrants by incumbents<sup>738</sup>.

In electronic communications, structural separation is claimed to be introduced in markets where there is still a flagrant lack of competition by incumbent operators, still

---

<sup>735</sup> Waters, P., Yuen, A., *ibid.*, 233.

<sup>736</sup> *Ibid.*, 238.

<sup>737</sup> Refer to Salerno, F., *Neutral Networks: The Paradox of Unbundling in the European Regulation of Energy and Telecommunications*, [2008] ECLR 471-479, for a description of the rules of the electricity markets.

<sup>738</sup> European Commission, 2007 Telecoms Reform No. 2, November 2007, <http://ec.europa.eu/ecom>.

controlling the vast majority of the fixed access lines, where facilities-based competition has been limited and regulatory requirements designed to facilitate entry into the local segment through resale or unbundling requirements have proven very difficult to implement in large part due to the regulators' inability to prevent local incumbents from resorting to exclusionary tactics<sup>739</sup>. Economic literature has summarised the factors warranting structural measures on telecommunications access markets in the following:

- i) competition in the local loop is limited;
- ii) unbundling is either not required or difficult to implement;
- iii) the telecommunications regulator appears unable to enforce non-structural safeguards; and
- iv) there seem to be few competitors strong enough to enter the local market and mount a strong challenge to the incumbent<sup>740</sup>.

In other words, structural separation is not introduced as a measure enhancing facilities-based competition, which is the most efficient means against market concentration in network markets, but as the means of achieving better competitive results in the short to medium term.

When competition starts to take hold, and this is what is happening in oligopolistic markets, where competitive forces may range from full competition to virtually monopoly effects, depending on the characteristics of the market's structure, structural separation does not improve the effectiveness of competition.

There is no reported implementation of structural or operational separation for regulatory purposes in oligopolistic markets. In fact, the efficiency of structural separation for the purposes of regulating oligopolistic markets is disputed, because of the increased transparency created through the separation of operations. The Australian Government favoured the operational separation of Telstra's activities, because, among other, it would improve transparency of Telstra's operation and equivalence to Telstra's wholesale customers quickly without significantly impacting on Telstra's

---

<sup>739</sup> Geradin, D., Kerf. M., *Controlling market power in telecommunications*, OUP, 2003, 329.

<sup>740</sup> *Ibid.*, 331.

existing commercial activities<sup>741</sup>. In its Cable Review, the Commission had explained that

“the mere separation of accounts will only render financial flows more transparent, whereas legal separation will lead to *more* transparency of assets and costs and will facilitate *monitoring of the profitability* and the management of the cable network operations”<sup>742</sup> [emphasis added].

It is reminded from preceding analysis that, transparency is a key factor to the establishment of collusive behaviour in oligopoly members and that transparency obligations should be imposed with caution for the regulation of SMP in oligopolistic markets.

Further, economists have challenged the effectiveness of structural remedies in oligopolistic environments on the grounds that inappropriate divestments may actually facilitate collusion by restructuring an industry in a more symmetric way<sup>743</sup>. Structural remedies have been considered inappropriate in the context of mergers leading to the creation of an asymmetric oligopoly, where the predicted collusive outcome takes the form of price leadership, since they may concomitantly increase the overall symmetry of market shares within the entire oligopoly. In such cases, a divestiture to a third party will simply change the nature of collusion on the market<sup>744</sup>.

The reduced effectiveness of structural separation in oligopolistic environments should be also examined in the light of the risks entailed in such measure which were described at the beginning of this sub-section, notably of the risk of welfare losses, as a result of abolishing economies of scale and scope and particularly of the concern that

---

<sup>741</sup> Waters, P., Yuen, A., *ibid.*, 233.

<sup>742</sup> Par. 53.

<sup>743</sup> Papandropoulos, P., Tajana, A., *The Merger Remedies Study – In Divestiture we Trust?*, [2006] ECLR., 449.

<sup>744</sup> Petit, N., *Remedies for Coordinated Effects under the European Union Merger Regulation*, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1639906](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1639906), 12. Petit refers also to *Alcan/Pechiney*, where the Commission found that the merged entity and VAW (the second largest producer of aluminium flat-rolled products) would occupy a duopolistic dominant position. The Commission observed that thanks to its prevailing position within the duopoly, the merged entity would be able to enrol VAW into a tacitly collusive scheme. To alleviate the Commission’s concerns, the parties offered to divest part of their aluminium rolling capacity. The Commission rejected the proposed remedy. Anticipating that VAW would likely acquire the divested capacity, the Commission predicted that the remedy would maintain a duopolistic dominant position, in creating “*two players with symmetrical market positions*”.

the remaining set of functions will not operate as incentive to innovate. The last concern is of particular significance, since oligopolistic markets are likely to arise in relation to products and services with heavy investment requirements.

## 5.4 Access Obligations

### 5.4.1 The duty to share an (essential) facility

Article 102 does not, in principle, impose upon dominant companies a general duty to deal with others or to share their assets with others primarily because the freedom of contract is a fundamental principle enshrined in EC competition law and the laws of the member states<sup>745</sup> and the dominant position of an undertaking does not deprive it of the right to protect its commercial interests. Protecting competitors is not an end in itself, but rather the means of protecting consumers, all the more so when limitations on the firm's decision-making runs the risk of hindering innovation<sup>746</sup>.

However, an undertaking may be found to abuse its dominant position in the market, if it uses that position to eliminate competition in a neighbouring market by means of a refusal to supply. The first time the CJEU adopted such approach was in *Commercial Solvents*<sup>747</sup>, where it held that a refusal to supply an existing competitor by an undertaking abusing its dominant position in a market to force its way into a neighbouring market is in breach of Article 102 of the Treaty. The Court went further in *United Brands*<sup>748</sup>, by ascertaining that the dominant firm cannot stop supplying a long-standing customer, who abides by regular commercial practice. *Magill*<sup>749</sup>, which concerned the refusal of three TV operators to grant access to their weekly programme listings<sup>750</sup>, was the first case to establish a positive obligation on the dominant firm to supply a new customer willing to compete with it on an ancillary market.

---

<sup>745</sup> Grewlich, K., "Cyberspace": *Sector-Specific Regulation and Competition Rules in European Telecommunications* [1999] C.M.L.Rev., 959.

<sup>746</sup> Subiotto, R., O' Donogue, R., *Defining the Scope of the Duty of Dominant Firms to Deal with Existing Customers under Article 82 EC*, [2003] ECLR, 683-684.

<sup>747</sup> Cases 6, 7/73, *Commercial Solvents v. Commission*, [1974] ECR 223.

<sup>748</sup> Case 27/76, *United Brands v. Commission*, [1978] ECR 207.

<sup>749</sup> Joined Cases C-241/91 and 242/91, *RTE and ITP v. Commission of the European Communities*, Judgement of April 6, 1995.

<sup>750</sup> As such, *Magill* has been regarded as a "ghost" oligopolistic case (refer to Petit, N., *The Oligopoly Problem in EU Competition Law*, *ibid.*, 72).

In *IMS Health*<sup>751</sup>, the ECJ held that a refusal to provide access to indispensable elements for a competitor to carry on its business is abusive if three conditions are met, namely that the refusal is preventing the emergence of a new product that consumers may demand, that it is unjustified, and it is likely to eliminate all market competition where the new product emerges. “Elimination of all competition” and “indispensability” do not need to be absolute. If the Court has to wait until all competition is actually eliminated, the harm to consumers and industry would be irreparable<sup>752</sup>. The position was reiterated in *Deutsche Telekom*<sup>753</sup> and *TeliaSonera Sverige*<sup>754</sup>.

‘Refusal to deal’ principles apply equally to existing customers and first-time requests. This is also the position taken in the Access Notice, which was the first Commission document to set out comprehensive access principles in the telecommunications sector<sup>755</sup>. The practical differences between the two lie in that in existing customers cases, it is more difficult for the defendant to argue that it has a valid business justification for ceasing to supply the complainant, unless circumstances have changed and in that in new customer cases, it is more difficult to resolve the issue of determining the proper price and terms of access<sup>756</sup>.

US antitrust law has developed the essential facility doctrine to justify imposing an obligation on a dominant firm to share its assets with competitors<sup>757</sup>. A facility

---

<sup>751</sup> Case C-418/01, judgement of 29 April 2004.

<sup>752</sup> Le, N., *What Does “Capable of Eliminating all Competition” Mean?*, [2005] ECLR 7.

<sup>753</sup> Case C-280/08 P, *Deutsche Telekom AG v Commission* [2010] ECR I-9555. The judgment of the ECJ confirms that even in circumstances where the conduct of a national regulatory authority may be regarded as having encouraged a dominant company to act in an abusive manner, this cannot serve to absolve a company from responsibility under Article 102 TFEU. Provided that national law affords a dominant company a margin of discretion, that company must use that margin in a way so as to avoid engaging in abusive conduct.

<sup>754</sup> Case C-52/09, *Konkurrensverket v TeliaSonera Sverige AB* [2011] ECR I-527.

<sup>755</sup> The Access Notice, par. 83f.

<sup>756</sup> Ritter, C., *Refusal to Deal and “Essential Facilities”: Does Intellectual Property Require Special Deference Compared to Tangible Property?*, [2005] World Competition, 285.

<sup>757</sup> The doctrine has been expressed by lower Courts in the US in several cases including *United States vs Terminal Railroad Association of St. Louis* (1912) 224 U.S. 383, 32 S. Ct. 507, *Associated Press v. United States* (1945) 326 U.S. 1, *Otter Tail Power v. United States* (1948) 334 U.S. 100, *Aspen Skiing Co v Aspen Skiing Corp (Aspen)* (1985) 472 U.S. 585, 610. In *MCI v. AT & T*, 708 F.2d 1081, the Court summarised four premises for the application of the essential facilities doctrine, as follows: a) control of the essential facility by a monopolist, b) a competitor’s inability practically or reasonably to duplicate the essential facility, c) the denial of the use of the facility to a competitor and d) the feasibility of providing the facility.

controlled by a single firm will be considered “essential” under the essential facilities doctrine only if the control of the facility carries with it the power to eliminate competition in a downstream market<sup>758</sup>. The essential facility concept was at the centre of the Access Notice, as it was considered that the concept would be of relevance in determining the duties of relevant Telecommunications Operators<sup>759</sup>. The Access Notice summarised the elements that must be taken into account for the imposition of access obligations as follows: a) access to the facility must be essential for companies to compete on the related market; b) there is sufficient capacity to provide the access; c) the facility owner fails to satisfy demand on an existing service, blocks the emergence of a potential new service or impedes competition on an existing or potential service or product market; d) there is no objective justification for refusing to provide access on reasonable and non-discriminatory terms and prices<sup>760</sup>.

However, the significance of the essential facilities doctrine is debatable under EC competition law, since for the application of Article 102, such doctrine is not required. In an EC context,

‘The only benefit of the doctrine is its function as a catchword for a specific group of cases, in which the abuse of a dominant market position, and often the dominant position itself, emerges from the exclusive control over a specific facility’<sup>761</sup>.

Reliance on the essential facilities doctrine or refusal to deal principles should not be over-zealous, because this carries the risk of damage to the system of dynamic incentives to economic efficiency on which economic and technical progress relies<sup>762</sup>. An asset may qualify as essential facility if it is acknowledged that it is neither feasible nor even desirable for competitors to replicate the asset concerned. The owner of the

---

<sup>758</sup> Subiotto, R., *The Right to Deal with Whom One Pleases under EEC Competition Law: A small Contribution to a Necessary Debate*, [1992] ECLR, 243.

<sup>759</sup> European Commission, Notice on the application of competition rules to access agreements in the telecommunications sector, [1992] OJ C 265/2, par. 68f.

<sup>760</sup> Par. 91 of the Access Notice.

<sup>761</sup> Mueller, U., Rodenhausen, A., *The Rise and Fall of the Essential Facility Doctrine*, [2008] ECLR, 319. The authors also rebut the thesis that European law adopted the essential facilities doctrine from US law on the grounds that neither the Commission nor the ECJ ever refer to US law in the essential facility cases, like *Commercial Solvents*, *CBEM/Telemarketing*, *Port of Rodby* and *Oscar Bronner*, although it is not excluded that they were factually influenced by US judicature.

<sup>762</sup> Nikolinakos, N., *The New Legal Framework for Digital Gateways- the Complementary Nature of Competition Law and Sector-specific Regulation*, [2000]9 ECLR, 411-414.



essential facility should not be subject to competitive pressure, either in the form of existing assets also competing at the upstream level, or in the form of potential assets that other firms might create<sup>763</sup>. If competitors were able to immediately enter the market and become fully competitive in the static sense, then prices would drop and profits would be driven to zero, thus eliminating future incentives to innovate<sup>764</sup>.

In very innovative environments, in which the interconnection knowledge is constantly under challenge, the control over the system's design configuration can become an essential precondition for the capacity of the firm to innovate its own activity<sup>765</sup>. In *Microsoft*<sup>766</sup>, the Commission imposed the burden of proof on defendants, who must show that their refusal to supply does not reduce incentives to innovate<sup>767</sup>. In the same case, the Commission and the GC were considered to give overwhelming importance to the regulation of conduct which distorts market structure and damages competitors, rather than an assessment of what this behaviour may indicate about possible anticompetitive purposes and consumer detriment<sup>768</sup>, which supported the view that the judgement should be characterised as an essential facility case, because of the importance of compatibility and connectivity in the software industry where network effects were pervasive<sup>769</sup>.

---

<sup>763</sup> Ridyard, D., *Essential Facilities and the Obligation to Supply Competitors under UK and EC Competition Law*, [1996] ECLR., 438-448.

<sup>764</sup> Wielsch, D., *Competition Policy for Information Platform Technology*, [2004] ECLR, 103.

<sup>765</sup> Kerber, W., Vezzoso, S., *EU Competition Policy, Vertical Restraints and Innovation: An Analysis from an Evolutionary Perspective*, [2005] World Competition, 527.

<sup>766</sup> Case COMP/C-3/37.792, *EC Commission v. Microsoft*, decision of 24 March 2004. The decision was upheld by the GC on September 17, 2007, OJ L 32/23. The Commission considered whether the information requested by Sun which Microsoft was deemed to have refused was needed by rival server operating system vendors to enable their work group server operating systems to interoperate with Microsoft's client computers as well as with Microsoft's work group server operating systems on the same network. The Decision concluded that Microsoft's competitors needed access to "protocols" that provide "set[s] of "rules of interconnection and interaction" between Windows client and work group server operating systems on different computers in a work group network.", par. 39)

<sup>767</sup> Leveque, F., *Innovation, Leveraging and Essential Facilities: Interoperability Licensing in the EU Microsoft Case*, [2005] World Competition, 71-91.

<sup>768</sup> Howarth, D., McMahon, K., "*Windows has Performed an Illegal Operation*": the Court of First Instance's Judgement in *Microsoft v Commission*, [2008] ECLR, 124.

<sup>769</sup> *Ibid.* Howarth and McMahon express the view that reconciling *Microsoft* with the Discussion Paper is difficult in that in par. 4 it sets out the object of Article 82 as a means of enhancing consumer welfare and of ensuring an efficient allocation of resources. In the same line, Colomo Ibanez, P., *The Law on Abuses of Dominance and the System of Judicial Remedies*, LSE Law, Society and Economy Working Papers 13/2013, [http://www.lse.ac.uk/collections/law/wps/WPS2013-13\\_Ibanez.pdf](http://www.lse.ac.uk/collections/law/wps/WPS2013-13_Ibanez.pdf), argues that where the Microsoft standard applies, it is not necessary to show that rivals have actually been (or are likely to be, in light of the context in which the practice is implemented) foreclosed from the relevant market; this creates legal uncertainty since it shows that lower or different substantive standards may be subsequently endorsed by the Commission and European Courts.

The Remedies Study<sup>770</sup> suggested the failure of access obligations in merger cases, but the small sample of cases with access remedies that were examined does not allow firm conclusions to be drawn. In fact, remedies involving the granting of access to infrastructure or other types of technology platforms were imposed on 9% of merger cases examined under the Remedies Study, whereas only 4 out of a total of 96 cases examined under the study involved access to infrastructure<sup>771</sup>. Nonetheless, the study pointed out that in 3 out of these 4 cases, i.e. in 75% of the cases, access obligations were not proved effective mainly because of the limited period of application (3 years), which was not revisited upon expiry of this original term. According to the Study, this was due to the fact that the Commission's original assessments as to the prompt development of the related market under review, which was considered 'emerging', did not materialise<sup>772</sup>.

#### **5.4.2. Ex ante access obligations as a specific demonstration of the refusal to deal principles**

Access obligations in European electronic communications were imposed for the first time in 1990 by means of the ONP Directive<sup>773</sup>, as the means of gradually liberalising an environment where telecommunication services were provided by the incumbent operator. Access obligations rest on competition law principles of refusal to supply. Access to wholesale electronic communication networks is vital for the economic success on many downstream markets for the provision of retail services.

The former regulatory framework assumed that competition would be established if new operators were authorised not only to provide all telecommunications services in competition with historical operators, but also to build their own telecommunication networks (e.g. through equal access to public and scarce resources)<sup>774</sup>. But, competition among local networks cannot be introduced efficiently if it is not done quickly and on a massive scale. Access obligations were imposed on SMPs, because

---

<sup>770</sup> DG Competition, Merger Remedy Study, October 2005, available at [http://europa.eu.int/comm/competition/mergers/others/remedies\\_study.pdf](http://europa.eu.int/comm/competition/mergers/others/remedies_study.pdf), (the Remedies Study).

<sup>771</sup> The Remedies Study, par. 36-38.

<sup>772</sup> *Ibid.*, p. 164f.

<sup>773</sup> Commission Directive 90/387/EEC of 28 June 1990 on the establishment of the internal market for telecommunications services through the implementation of open network provision, [1991] OJ L 192/1.

<sup>774</sup> E.g. article 1 par. 1 of the ONP Directive (Directive 90/387/EEC, refer to section 1.2.1 for details).

operators seeking to develop retail telecommunication services without their own networks depend on access to the former incumbent's facilities for local conveyance and connection to the customer base<sup>775</sup>. Wholesale open access rules for competitive suppliers utilising the facilities of the incumbent to reach end users, coupled with some form of a rate of return valuation has been considered the best policy response in static sectors plagued by last-mile monopoly<sup>776</sup>.

Nonetheless, in electronic communications, the successful differentiation between the main access markets comprising an essential facility and the downstream markets may not be as clear as in the off-line economy<sup>777</sup>, whereas, doubts have been expressed on the indispensability of networks, like an internet-user network, as a facility<sup>778</sup>. The Access Notice describes the situations where the incumbent's network may be considered an essential facility<sup>779</sup>.

The most characteristic example of a market necessitating access obligations has been traditionally the local loop, which is a typical single dominance issue of the former incumbent<sup>780</sup>. Given the magnitude of investment required to reproduce a historical operator's local network with full geographic reach, alternative operators are generally forced to roll out according to a linear protracted timetable<sup>781</sup>. This is the reason why

---

<sup>775</sup> The fundamental difference between the rules on liberalisation of telecommunications and rules in other sectors in the process of opening up to competition, such as electricity or railway transport is that in these sectors the starting point was a belief that the networks could not be reproduced and that it was therefore necessary to organise the regulatory framework so that the various players in the services market could use a sole network under equivalent conditions, Dupuis-Toubol, F., *The French Telecommunications Monopoly: How to Break the Bottleneck of the Local Loop*, [2002] CTLR, 131.

<sup>776</sup> Bittlingmayer, G., "Open Access: the ideal and the real", [2002] 26 Telecommunications Policy, 300.

<sup>777</sup> Mueller, U., Rodenhausen, A., *ibid.*, 329.

<sup>778</sup> *Ibid.*

<sup>779</sup> Par. 87f.

<sup>780</sup> Local loop is defined as the physical circuit between the telecommunications operator's local exchange and the final customer's premises. Traditionally, it takes the form of pairs of copper wires. With few exceptions (some areas of Finland and Denmark), in the pre-liberalisation period, the local loop of the incumbent operators was considered a utility and was built over a significant period of time through State funding. Vinje, Th., Kalimi, H., *Does Competition Law require Unbundling of the Local Loop?*, [2000] 3 World Competition, 52.

<sup>781</sup> In the UK, despite the adoption of a network based competition policy, the goal of creating effective nationwide competition as regards local network infrastructure by means of operators other than BT building their own networks never came close to being realised (refer to Hunt, A., *Dogma and Pragmatism in Telecoms Regulation: The case of Local Loop Unbundling*, [2000] 4 Util. Law Rev., 114). At the beginning of the 21<sup>st</sup> century, after one decade of operation by private cable companies, less than twenty per cent (20%) of UK households were connected to cable networks, whereas the extravagant amounts spent by operators for auctioning 3G licenses impeded the success of auction for

in the early years of the liberalisation competition was considered not emerging in this area<sup>782</sup>, which necessitated the adoption of the LLU Regulation<sup>783</sup>.

Competition in the local loop may be enhanced by means of using part(s) of the exchange network of the incumbent in conjunction with facilities provided by the competitor, i.e. by local loop unbundling (LLU)<sup>784</sup>, or through resale, i.e. by leasing wholesale circuits from the incumbent and selling capacity directly to users<sup>785</sup>. The increased demand for broadband services at affordable prices even for small to medium size enterprises (SMEs) operated as incentive for operators other than the incumbent to engage in the investment in DSL technologies<sup>786</sup>. On the contrary, the ability to offer competing services with the incumbent's traditional offering through the use of DSL technologies, such as voice over IP, acted as disincentive for the incumbents to invest in DSL<sup>787</sup>.

However, long-term advantages of investing in infrastructure should not be sacrificed in the name of short-term consumer benefits. Perhaps of the low returns available and short-sightedness about demand for broadband, under the former regulatory framework, the European Council and the Parliament underestimated the need of all operators, but particularly incumbents, to continue to invest heavily in

---

wireless fixed networks. Only 16 out of the 42 licenses offered in auction in November 2000 were sold. (Rowe, H., *ibid.*, 252-253).

<sup>782</sup> European Commission, *Communication from the Commission: Unbundled Access to the Local Loop: Enabling the competitive provision of a full range of electronic communication services including broadband multimedia and high-speed internet*, COM (2000) 237 final, 26.4.2000, par. 1.2.

<sup>783</sup> Council Regulation 2887/2000 subsequently repealed under the 2009 revision of the Directives.

<sup>784</sup> The need to unbundle network elements allowing use of local loop only, acquired particular importance with the development of broadband services, which could not be supported by the technology of old copper wire networks, which had to be upgraded to allow provision of broadband. DSL technology can have the effect of extending the bandwidth of the copper loop in order to render it capable of delivering high-speed services, such as high-speed internet access and broadband multimedia services. Until then, local loop unbundling was not considered necessary and, in fact, was even thought to form an obstacle to the development of alternative infrastructure, Hunt, A., *ibid.*, 114-115.

<sup>785</sup> Although resale appears to be the easiest method to enter the local market, it is the least financially attractive, because the discount between a competitive retail price and the assessed wholesale price for the use of the network tends to be small. Huntley, J., *ibid.*, 332.

<sup>786</sup> Before the passing of Regulation 2887/2000, OFTEL had favoured a regulatory approach in a form of partial baseband leased circuit (PBLC) distinguished from complete LLU, in that an operator purchasing PBLC would also lease a low frequency portion enabling it supply over it telephony services together with DSL services over the high frequency portion. Refer to OFTEL, *Access Network Facilities: OFTEL Guidelines on proposed condition 83 of BT's License* (July 2000). At the time, Germany seemed to be the most advanced member state in LLU, as it obliged Deutsche Telecom to lease the copper pair without bundling it to other services and with terms and conditions for the provision of the copper pair set by the regulator.

<sup>787</sup> Vinje, Th., Kalimo, H., *ibid.*, 51

telecommunications infrastructure in order to upgrade local networks to support high-speed internet access services for both fixed and mobile services, resulting in a combination of very high levels with equally heavy expenditure commitments<sup>788</sup>.

Under Recital 54 of Directive 2009/140/EC, the priority is on the promotion of new investment and the principle that access through regulation may be necessitated in order to achieve effective competition in retail services<sup>789</sup>. Under the framework for electronic communications the Commission has defined the markets at wholesale level where NRAs may impose compulsory access, thus qualifying the underlying facilities as essential for the provision of downstream telecom services. The obligations are similar to, but significantly broader than those in which the essential facilities doctrine is applied under competition law<sup>790</sup>. The extension lies in the replacement of the precondition on the ‘essentiality’ and ‘non-replicability’ of the asset by a much broader condition that NRAs can mandate access in circumstances where its denial would hinder the emergence of a sustainable competitive market at the retail level, or would not be in the end-user’s interest<sup>791</sup>.

Imposing an obligation to allow access carries more weight when the facility has been built with public money rather than acquired under competitive conditions. This is made clear in the revised wording of Article 12 par. 2(c) of the Access Directive:

“When national regulatory authorities are considering the obligations referred in paragraph 1, and in particular when assessing how such obligations would be imposed proportionate to the objectives set out in Article 8 of Directive 2002/21/EC (Framework Directive), they shall take account in particular of the following factors: (a)... (b)... (c) the initial investment by the facility

---

<sup>788</sup> Dupuis-Toubol, F., *ibid.*, 132-133. In the US, cable companies, who –at the time the 1996 Telecommunications Act was introduced- were the only ones in a position to provide significant facilities-based competition, chose not to invest in upgrading their networks so as to enable them to provide telecommunications services, because it was thought that there were few incentives and there were cheaper options to compete in the local loop, if they so wished, Huntley, J., *New Directions in US Telecommunications Regulation: The impact of the Telecommunications Act 1996 on “Local” Provision*, [2000]3 International Journal of Law and Information Technology, 319.

<sup>789</sup> It has been reported that the DG Competition intended to develop an exclusivity period awarding the investments in tangible products, but it is unclear what kind of test should be applied, Toth, A., *Protection of Investments in European Abuse of Dominance Cases*, [2008] ECLR, 715.

<sup>790</sup> Cave, M., Crowther, P., *Pre-emptive Competition Policy meets Regulatory Anti-trust*, [2005] ECLR, 484.

<sup>791</sup> Refer, e.g. to recital 55 of Directive 140/2009/EC.

owner, taking account of any public investment made and the risks involved in making the investment;”.

The Commission argued in favour of a duty to allow access on *Telefonica*<sup>792</sup>, because the original investments on the network were undertaken in a context where the company was benefiting from special or exclusive rights, which implied that the investment criteria used by the former monopoly at that time would have led to the investment being made, even if there would have been a duty to supply<sup>793</sup>. Conversely, it cannot be upheld that only brand new infrastructure is subject to competition law’s regulatory holiday<sup>794</sup>.

According to article 9 of the Access Directive, as amended by Article 2 of Directive 2009/140/EC, operators may be required inter alia:

- (a) to give third parties access to specified network elements and/or facilities, including access to network elements which are not active and/or unbundled access to the local loop, to, inter alia, allow carrier selection and/or pre-selection and/or subscriber line resale offer;
- (b) to negotiate in good faith with undertakings requesting access;
- (c) not to withdraw access to facilities already granted;
- (d) to provide specified services on a wholesale basis for resale by third parties;
- (e) to grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of services or virtual network services;
- (f) to provide co-location or other forms of facility sharing, including duct, building or mast sharing;
- (g) to provide specified services needed to ensure interoperability of end-to-end services to users, including facilities for intelligent network services or roaming on mobile networks;

---

<sup>792</sup> Case COMP/38.784, *Wanadoo Espana v Telefonica* [2008]OJ C83/6, par. 304.

<sup>793</sup> The same position is taken also in the Discussion Paper, par. 235.

<sup>794</sup> Toth, A., *Protection of Investments in European Abuse of Dominance Cases*, [2008] ECLR, 712.

- (h) to provide access to operational support systems or similar software systems necessary to ensure fair competition in the provision of services;
- (i) to interconnect networks or network facilities.

National regulatory authorities may attach to those obligations conditions covering fairness, reasonableness and timeliness”.

The determination of the terms governing access is a key to the proper functioning of access obligations. If network access is viewed as an essential facility, free negotiation can hardly be expected to provide a satisfactory solution<sup>795</sup>. In this sense, the non discrimination obligation described under section 5.2 is a condition precedent to the proper application of access obligations.

On 20.09.2010, the Commission issued its 2010 Recommendation on NGA with the primary intention of covering remedies to be imposed upon operators designated as SMP, pursuant to the market analysis procedure of the Framework Directive with the view of increasing regulatory certainty to prospective investors<sup>796</sup>. Under the Recommendation the Commission requires in market 4 of the 2007 Recommendation the mandating of access to civil engineering infrastructure and in the case of FTTH of access to the terminating segment under the Equivalence of Input principle and at cost oriented rates<sup>797</sup>, as well as unbundled access to the fibre loop, unless the presence of several alternative infrastructures, such as FTTH networks and/or cable, in combination with competitive access offers is likely to result in effective competition on the downstream level<sup>798</sup>. In the migration to NGA from PSTN broadband, NRAs may impose on SMP operators ‘alternative access products which offer the nearest equivalent that constitutes a substitute to physical unbundling’<sup>799</sup>, although the ‘nearest equivalent’ is not defined further. On market 5 of the 2007 Recommendation, NRAs

---

<sup>795</sup> On 22.06.2011, the European Commission has imposed a fine of €127,5 million on Telekomunikacja Polska S.A. (TP) for abusing its dominant position in the Polish market for consistently refusing access (or making it more difficult) to alternative operators on downstream broadband markets by proposing unreasonable conditions governing access to the wholesale broadband products (e.g. exclusion or modification of contractual clauses and extension of deadlines to the detriment of alternative operators), delaying the negotiation process, rejecting alternative operators' access orders on unreasonable grounds and by refusing to provide reliable and complete General Information on its network (IP/11/771 and MEMO/11/444).

<sup>796</sup> Recitals 4 and 6 and par. 1 and 2 of the Recommendation.

<sup>797</sup> Par. 13-20 of the Recommendation.

<sup>798</sup> Par. 23 of the Recommendation.

<sup>799</sup> Par. 21 of the Recommendation.

should oblige the SMP operator to make new wholesale broadband access products available in principle at least 6 months before the SMP operator or its retail subsidiary markets its own corresponding NGA retail services, unless there are other effective safeguards to guarantee non-discrimination<sup>800</sup>.

The NGA Recommendation does not include any reference to collective SMP; on the contrary repeated references to applicable measures “on the SMP operator” (in the singular) create the impression that collective dominance issues were not considered at all in the context of the Recommendation. We shall now discuss problems associated with the application of access obligations in oligopolistic markets.

#### **5.4.3 Are oligopolies compatible with access obligations?**

Although the principles of the Access Notice are expressly said to apply in cases of collective dominance also<sup>801</sup>, the application of the principles behind access obligations in oligopolistic environments is not free from risks.

First, the underlying principle of access obligations, which is found in the essential facilities doctrine, depends on the existence of a monopolistic situation and it is difficult to see how the essential facilities doctrine may apply in oligopolistic markets, unless the oligopolists control jointly the essential facility, as was the case of Port of Rodby<sup>802</sup>. In *Phoenix/Global One*<sup>803</sup>, the Commission imposed access obligations on DT and FT access to their respective X-data packet switched networks, on non-discriminatory terms, including availability of volume or other discounts and the quality of the interconnection provided as a condition precedent for the clearance of the notification. But, that was for the separate national markets that DT and FT were

---

<sup>800</sup> Par. 32 of the Recommendation.

<sup>801</sup> Section 1.3, par. 76-80 of the Access Notice.

<sup>802</sup> Case 94/119/EC, [1994] OJ L55/52. In this case, the undertakings at issue were controlling jointly the Rodby-Putgarten route linking Germany and Denmark by sea and the refusal to allow a Swedish subsidiary to operate from the port of Rodby was found to constitute abuse of the parties' joint dominant position. However, it is reminded from the analysis of section 5.1.2 that access obligations on SMPs may be broader than those applied under the essential facilities doctrine, since NRAs can mandate access in circumstances where its denial would hinder the emergence of a sustainable competitive market at the retail level, or would not be in the end-user's interest.

<sup>803</sup> Case IV/35.617, Commission decision of 17 July 1996, OJ L 239/57.



operating. Also, in *MCI/WorldCom*<sup>804</sup> the merging parties were considered part of the “big four” top-level ISPs globally, who were found to have a position stronger than the other ISPs, although possible oligopolistic or collusive behaviours between these four were not specifically examined. However, it was the merger itself that was found to cause the merged networks an essential facility, to which all other ISPs would have no choice but to interconnect (directly or indirectly) in order to offer a credible Internet access service<sup>805</sup>.

Albeit statements relevant to collective dominance were omitted from the Commission’s Guidance on the enforcement of Article 102, in its 2005 Discussion paper, the Commission included in the enumerated possibly abusive practices from oligopolists refusal to supply access to an essential facility. In this document<sup>806</sup> the Commission pointed primarily to the refusal of access to an input that is collectively owned by a group of companies, but it also accepted that refusal of access to the individual owned inputs can also constitute an abuse.

However, if two or three dominant entities control access to their networks and they all unilaterally refuse to provide access to a potential competitor, it is difficult to make an equitable choice of the competitor that would have to allow access, whereas the existence of more than one network means a lack of essentiality<sup>807</sup>. The ERG pointed to the case of replicability of the assets as being a criterion which can be used to choose an appropriate remedy. If an asset is virtually non-replicable in the medium term, the imposition of pricing obligations is considered more appropriate, especially if there are no investment issues. The imposition of access obligations is considered more appropriate in cases where the asset is replicable, but after some time<sup>808</sup>.

In IE/2004/0121, ES/2006/0330 and MT/2006/0443, the Irish, Spanish and Maltese NRAs considered that MNOs had strong incentives to deny wholesale access to third

---

<sup>804</sup> Case M.1069, Commission decision of 08 July 1998, OJ L 116/1.

<sup>805</sup> Par. 126 of the decision.

<sup>806</sup> Par. 74 and 211 of the Discussion Paper.

<sup>807</sup> However, Stratakis, A., *Comparative Analysis of the US and EU approach and enforcement of the Essential Facilities Doctrine*, [2006] ECLR, 440, argues that the essential facilities doctrine may be applied in a greater variety of situations in the EU, especially because taking advantage of a bottleneck situation through a collective denial of the use of a facility seems fairly easy to implement and monitor exclusionary behaviour on behalf of a group.

<sup>808</sup> ERG Common Position on SMP remedies, 58-59.

parties (MVNOs) and imposed access obligations on all mobile operators (two in Ireland and Malta and three in Spain) so that all reasonable requests for access are met. In case disputes arose as to the reasonableness of the request, the NRA would decide on the matter. However, the equitable choice of the operator that would allow access was not made.

In IT/2007/0729, the Italian NRA imposed on the Italian broadcasters that were found to enjoy SMP in the analogue broadcasting market access obligations in the form of collocation and sharing of infrastructures and offer management of transmission devices on the grounds that this would enable the development and integration of third party broadcasters' networks and the increase of their associated coverage.

Second and more importantly, access remedies, involve the co-operation between the entity under scrutiny and third parties, may facilitate the exchange of information between competitors and, thus, collusion<sup>809</sup>. Indeed, the idea behind access obligations is the joint use of the same network or infrastructure by several competitors. The joint use of the same facilities by competitors produces more co-operation between them than necessary for independent companies, whereas free competition requires the independence of all competitors on the same market<sup>810</sup>. In other words, access obligations may enhance collusion between market players and access agreements may be instrument of market sharing.

The Access Notice recognises the existence of potential anti-competitive effects in access agreements, including the risks, a) of coordinating prices, b) of market sharing and c) of exchange of commercially sensitive information between parties<sup>811</sup>. The Access Notice places particular emphasis on the risk of price coordination under access agreements :

‘The risk of price coordination is particularly acute in the telecommunications sector, since interconnection charges often amount to 50% or more of the total cost of the services provided, and where interconnection with a dominant operator will usually be necessary. In these

---

<sup>809</sup> Papon, S., *Structural versus Behavioural Remedies in Merger Control: A Case-by-Case Analysis*, [2009] ECLR, 38.

<sup>810</sup> Mueller, U., Rodenhausen, A., *ibid.*, 321.

<sup>811</sup> Par. 134 of the Access Notice.

circumstances, the scope for price competition is limited and the risk (and the seriousness) of price coordination correspondingly greater<sup>812</sup>.

This remark has not been repeated in the 2002 Guidelines on market analysis, nor has any relevant hint been made in the preambles of either the 2002 directives or of their 2009 revision; this suggests, again, that the primary focus of the SMP package is on the incumbent and that oligopolies are simply dealt with as a small part of the dominance problem in the sector.

Nonetheless, in electronic communications, access is inevitable, even if not a remedy, since network markets entail some form of co-operation between market players anyhow due to inherent network externality features. It is also stressed that, Article 5 of the Access Directive, as currently in force, obliges NRAs to encourage and, where appropriate ensure adequate access, interconnection and interoperability of services, without prejudice to measures taken in the scope of SMP regulation<sup>813</sup>.

However, economic studies have shown that in oligopolistic markets with bottlenecks being held by more than one player, additional entry –which is favoured through the taking of access measures – is not necessarily welfare improving, because it may lead the retail prices of the access provider rise above pre-entry levels<sup>814</sup>. Notably, entry through access obligations, if they are not complemented by some form of price regulation, may also lead to higher prices, particularly in markets with more than two players or where there is already collusion between the oligopolistic players. Because if the access price is collusive, the oligopolists may continue to charge higher prices to the consumers they keep after entry and, at the same time, obtain a large wholesale profit from the consumers lost to the entrant<sup>815</sup>.

---

<sup>812</sup> *Ibid.*, par. 135.

<sup>813</sup> Article 5 par. 1 of the revised Access Directive.

<sup>814</sup> Goliath, *Access to Bottleneck Inputs under Oligopoly: a prisoner's dilemma?*, Southern Economic Journal, 2010, available at [http://goliath.ecnext.com/coms2/gi\\_0199-12143888/Access-to-bottleneck-inputs-under.html](http://goliath.ecnext.com/coms2/gi_0199-12143888/Access-to-bottleneck-inputs-under.html)

<sup>815</sup> Brito, D., Pereira, P., *Access to Bottleneck Inputs under Oligopoly: a Prisoners' Dilemma?*, [2008] at [http://www.concorrenca.pt/download/WP16\\_Bottleneck\\_Feb\\_2008.pdf](http://www.concorrenca.pt/download/WP16_Bottleneck_Feb_2008.pdf).

Hence, for the reasons set out above, access obligations may bring the desired results against SMP exercised by oligopolists, only to the extent that these are complemented by price regulation.

#### **5.4.4. Is there any alternative?**

Is there an alternative to such access measures?

In mergers, as an alternative to divestiture, but also in an attempt to avoid collusive practices that may appear as a result of the application of behavioural remedies, economists have proposed the design of a contract, whereby the merging parties would commit to pay a third party (e.g. a major lender to the merging firms) a per unit penalty for lowering production, but would be paid a per-unit reward for increasing production<sup>816</sup>. This proposal is claimed to merit particular attention in Cournot-style oligopolies, where the parties are inclined to set profit maximising output levels. Notably, in such markets, instead of divestments, the merging parties could commit to pay a per unit penalty for non-disposal of unused capacity in excess of a capacity threshold set to that effect.

The Commission has also cleared mergers on the basis of quasi-contract types of remedies. In *AirFrance/KLM*<sup>817</sup>, the parties committed to apply an equivalent reduction on the fare Lyon-Amsterdam, on which they enjoyed SMP, every time they reduced the corresponding fare on the Paris-Amsterdam route.

The benefit of the foregoing suggestions is that they resemble more to supply contracts, instead of access obligations, which makes them easier to monitor and enforce and less volatile to manipulations. Of course, one should balance the benefits with the risk associated with direct intervention in market prices and the potential distortion of competition.

---

<sup>816</sup> Ezrachi, A., *Behavioural Remedies in EC merger control – scope and limitations*, [2006] World Competition, 462

<sup>817</sup> Case COMP/M.3280, *Air France/KLM*.

In oligopolistic wholesale markets in electronic communications a similar pattern could be followed. If NRAs detected refusal to supply access-seekers by oligopolists in a network market with ineffective competition, instead of imposing access obligations, oligopolists could be enforced to pay a penalty to a Fund or Trust entrusted with the power to fund the creation of alternative infrastructure. Access seekers could have recourse to the Fund/Trust for funding for the deployment of own networks. Hence, on the one hand, access is enhanced through the roll out of alternative networks and, on the other hand, the downsides of access remedies in oligopolistic markets may be minimised.

It is reminded from the analysis in Chapter 3 that the Commission has always placed emphasis on the introduction of new market players, as the main source of competitive constraint against either single or collective SMP, since the first and most important criterion for the eligibility of a market as susceptible to *ex ante* regulation is the existence of high barriers to entry preventing the emergence of new players. The main benefit of the alternative remedy suggested above over access obligations in oligopolistic markets with indications of tacit collusion is that it may act as a deterrent to future collusive behaviour<sup>818</sup> it enhances the development of new competitive forces through the deployment of new infrastructure, capable of operating without dependence on existing market players.

In the UK mobile market of the early nineties, the two incumbents, Cellnet and Vodafone, adopted parallel pricing and were obliged by the UK regulator to provide access to their network to a maximum of independent service providers. However, it was the entry into the market of the networks of One2One and Orange in 1993 and 1994 respectively, which led to sharp price reductions and made UK mobile services among the cheapest in the world<sup>819</sup>. The UK example shows that the main source of competitive constraint is the appearance of new entrants through the deployment of a new infrastructure, not the provision of services by additional providers over the incumbents' networks. This complies also with the finding of the 2013 Final Report on

---

<sup>818</sup> The deterring effect is one of the main underlying principles of the imposition of fines in the case of explicit collusion, Kaplow, L., An economic approach to price fixing, [2011]2 *Antitrust Law Journal*, 418.

<sup>819</sup> Geradin, D., Kerf, M., *ibid.*, 325.

market assessment commissioned by the DG Connect<sup>820</sup>, that MVNOs with a market share of more than 5% are uncommon across the EU and that on average only one MVNO per five countries has a ‘significant’ market share, albeit the term ‘significant’ is not defined further; MVNO access may not have been as successful as anticipated in all member-States.

On several occasions, the Commission considered the introduction of new networks crucial in prejudicing the parallel behaviour of existing operators. For example, the elimination of the third competitor (out of a total of three) in the Belgian mobile market, despite its low market share, was the reason for the expression of serious Commission doubts in relation to the impact of the concentration on the market in *FT/Orange*<sup>821</sup>. In *Hutchison 3G Austria/Orange Austria*<sup>822</sup>, the merger was cleared on condition of divestment of radio of spectrum and additional rights to an interested new entrant in the Austrian mobile telephony market, who would have the right to acquire spectrum not only from H3G but also additional spectrum at the next auction, so that the new entrant would build up a physical network for mobile telecommunication services in Austria. The new entrant would also benefit from privileged conditions for the purchase of sites for building up its own network in Austria. Also, in MT/2008/803 the Maltese NRA decided against the existence of collective dominance in the wholesale broadband market mainly by the reason of the entry of a newcomer who, despite the low market share at the time, had quickly established a wireless broadband network covering the whole territory of Malta with new wireless technology, capable of exercising competitive pressure on the two fixed broadband operators.

In 2001, Gal suggested a method for regulating oligopoly pricing by way of introducing a government-supported maverick into an oligopolistic industry for a limited time<sup>823</sup>. The maverick would price its products at competitive or near-competitive levels in order to force its competitors to follow its pricing. According to Gal, the proposal may significantly reduce allocative inefficiency by reducing the welfare losses from supra-competitive pricing and productive inefficiency by

---

<sup>820</sup> Ecorys, Future electronic communications markets subject to ex ante regulation, 18.09.2013.

<sup>821</sup> Case COMP/M.2016, *France Telecom/Orange*, 11.8.2000, par. 28.

<sup>822</sup> Case COMP/M.6497/*Hutchison 3G Austria/Orange Austria*.

<sup>823</sup> Gal, M., *Reducing Rivals Prices: Government-Supported Mavericks as New Solutions for Oligopoly Pricing*, [2001] 7 *Stanford Journal of Law, Business and Finance*, 73-102.

combatting the problem of inefficient plant and firm sizes. The threat of intervention might be sufficient, in itself, to reduce the problem of oligopoly pricing.

Gal also mentions that, granting tax expenditures (in the form of subsidy payments, tax exemptions, or tax credits) to new firms that enter an oligopolistic market or to existing competitors that invest in infrastructure and increase output, may also reduce oligopolistic pricing. She argues that, tax expenditures have been used in the electricity generation industry in the US to combat market imperfections and to increase competition, but cost reductions should be high enough to enable potential competitors to earn rewards similar to those earned in a competitive industry<sup>824</sup>. If cost reductions like tax expenditures in an oligopolistic market are appealing enough to assist new entry, thereby causing increased competition and reduced prices, the same result may be also effected with other cost reductions like financing costs, according to the above suggested alternative. Like in the case of Gal's direct government subsidy to the maverick firm, the threat of intervention might be sufficient, in itself, to reduce the problem of oligopoly pricing.

However, governments' interventions in support of maverick players would likely infringe the prohibition of State aid under Article 107 TFEU, whether direct or indirect<sup>825</sup>. Hence, it needs to be examined if the suggested option for the imposition of a penalty capable of being applied for the financing of alternative infrastructure may be considered State aid.

In line with Article 107(1) TFEU, the concept of State aid includes the following conditions: (a) there must be an intervention by the State or by means of State resources; (b) the intervention must be liable to affect trade between Member States; (c) it must confer an advantage of the beneficiary; (d) it must distort or threaten to distort competition. The existence of State aid has to be assessed on an objective basis, taking into account the jurisprudence of the Community Courts.

According to such jurisprudence, the granting of loan and credit facility by State controlled organizations may comprise State aid, if the terms of the facility are more

---

<sup>824</sup> *Ibid.*, 87.

<sup>825</sup> Petit, N., *ibid.*, 56.

advantageous to the terms that the borrower could agree under normal market conditions<sup>826</sup>. In *Sloman Neptun*<sup>827</sup>, the CJEU defined State intervention also in cases of entities or bodies acting under statutory authorization, albeit not included in the wider public sector. In *Credit Agricole*<sup>828</sup>, albeit the private origination of the funds was not disputed, the CJEU considered it a case of illegitimate State aid, mainly on the basis of French legislation allowing the exercise of decisive influence from the part of the French State on the management of the Fund distributing the capitals at stake.

In its landmark judgment on *Altmark*<sup>829</sup> the Court held that there is no State Aid where a State financial measure must be regarded as compensation for the services provided by the recipient undertakings in order to discharge public service obligations and set out the four conditions necessary for such compensation to escape classification as State aid: (a) the recipient undertaking must actually have public service obligations to discharge and those obligations must be clearly defined; (b) the parameters on the basis of which the compensation is calculated must be established in advance in an objective and transparent manner; (c) the compensation cannot exceed what is necessary to cover all or part of the costs incurred in the discharge of the public service obligations, taking into account the relevant receipts and a reasonable profit; and (d) where the undertaking is not chosen in a public procurement procedure, the level of compensation must be determined by a comparison with an analysis of the costs which a typical transport undertaking would incur (taking into account the receipts and a reasonable profit from discharging the obligations).

According to settled case-law, it is not necessary to establish in every case that there has been a transfer of State resources for the advantage granted to one or more undertakings to be capable of being regarded as a State aid within the meaning of Article 107(1) TFEU<sup>830</sup>. Measures which, in various forms, mitigate the burdens

---

<sup>826</sup> Case C-301/87, *France vs European Commission*, Case C-303/88, *Italy vs European Commission*, Case C-278/00, *Greece vs European Commission*.

<sup>827</sup> Cases C-72 and 73/91, *Firma Sloman Neptun Schiffahrts AG vs Seebetriebsrat Bodo Ziesemer der Sloman Neptun Schiffahrts AG*.

<sup>828</sup> Case 290/83.

<sup>829</sup> Judgment of 24.07.2003, Case C-280/00 *Altmark Trans GmbH and Regierungspräsidium Magdeburg v Nahverkehrsgesellschaft Altmark GmbH*.

<sup>830</sup> Case C-387/92 *Banco Exterior de España* [1994] ECR I-877, paragraph 14; Case C-6/97 *Italy v Commission* [1999] ECR I-2981, paragraph 16; and Case C-482/99 *France v Commission* [2002] ECR I-4397, paragraph 36, Joint Cases C-399/10P and C-401/10P, *Bouygues S.A., Bouygues Telecom S.A. vs European Commission*, paragraph 100).



normally included in the budget of an undertaking, and which therefore, without being subsidies in the strict meaning of the word, are similar in character and have the same effect, are considered to be aid<sup>831</sup>. Recently, in *Bouygues*<sup>832</sup> the Court held that it is not necessary to identify a reduction of the State budget or a sufficiently concrete economic risk of burdens on that budget, closely linked and corresponding to, or having as a counterpart, a specific advantage deriving from the intervention.

For the purposes of establishing the existence of State aid, the Commission must establish a sufficiently direct link between, on the one hand, the advantage given to the beneficiary and, on the other, a reduction of the State budget or a sufficiently concrete economic risk of burdens on that budget, but it is not necessary that such a reduction, or even such a risk, should correspond or be equivalent to that advantage, or that the advantage has as its counterpoint such a reduction or such a risk, or that it is of the same nature as the commitment of State resources from which it derives<sup>833</sup>.

On 16.09.2013, the GC issued its judgment on *Colt et al. vs Commission*<sup>834</sup>, in compliance with the *Altmark* judgment, whereby it upheld the Commission's decision that a project envisaged granting €59 million in compensation for the public service costs for the establishment and operation of a very high speed (fibre-optic) broadband electronic communications network in Hauts-de-Seine, France did not constitute State aid. However, in making such judgment, the Court took particular note of the fact the no commercial operator had deployed a very high speed broadband network serving domestic and professional users as a whole in that area.

Taking account the foregoing, the suggested financing of network roll-out by proceeds from penalties collected from SMP by a Fund or Trust entrusted with the power to fund the creation of alternative infrastructure, may fall in the concept of State aid of Article 107 TFEU, despite the private origin of the funds and possibly the private

---

<sup>831</sup> *Banco Exterior de España*, paragraph 13; Case C-75/97 *Belgium v Commission* [1999] ECR I-3671, paragraph 23; and Case C-156/98 *Germany v Commission* [2000] ECR I-6857, paragraph 25, Joint Cases C-399/10P and C-401/10P, *Bouygues S.A., Bouygues Telecom S.A. vs European Commission*, paragraph 101).

<sup>832</sup> Decision of the Court of 19.3.2013, Joint Cases C-399/10P and C-401/10P, *Bouygues S.A., Bouygues Telecom S.A. vs European Commission*, par. 105.

<sup>833</sup> *Ibid*, paragraph 109-110, also citing, Case C-279/08 P *Commission v Netherlands* [2011] ECR I-7671, paragraph 111.

<sup>834</sup> Cases T-79/2010 *Colt Telecommunications France vs Commission*, T-258/10 *Orange vs Commission* and T-325/10 *Iliad and others vs Commission*.

nature of the Fund or Trust. The problem lies in that the funds to be used for conferring credit facilities with privileged terms to new entrants will have been collected not on the SMP's own initiative, as in the case of commitments in merger cases like in the case of spectrum assignment in *Hutchinson3G Austria/Orange Austria*, but in implementing a penalty imposed by statutory instruments and collected by authorities acting under statutory authorisation.

Nonetheless, such aid may qualify as facilitating the development of the economic activities of a market with inefficient competition, since the suggested financing will assist the deployment of additional infrastructure. Also, given the failure of competition law to remedy the existing inefficiency (or else the market would not have been subject to ex ante regulation), the aid would not adversely affect trading conditions to an extent contrary to the common interest; on the contrary, it would improve the state of competition in the market<sup>835</sup>. Hence, the suggested option may be considered compatible with the internal market under Article 107 paragraph 3 TFEU, in which case the prior approval of the aid by the Commission must be obtained, pursuant to the provisions of Regulation 659/1999, as in force today<sup>836</sup>. On the other hand, the required approval may be also taken at EU level through the revision of the regulatory framework to allow the suggested option, in which case individual notifications on a case-by-case basis may not be required.

On assuming that the requisite approval could be obtained, the parameters on the basis of which the penalty is calculated must be established in advance in an objective and transparent manner. The applicant for the receipt of the credit facility must be chosen pursuant to a public procurement procedure which would allow for the selection of the bidder capable of providing those services in a cost-efficient manner, on the basis of

---

<sup>835</sup> In its Communication Community Guidelines for the application of State aid rules in relation to rapid deployment of broadband networks [2013] OJ C 25/01, the Commission set out that Government support for the deployment of broadband networks may be considered compatible with the internal market, provided that the following conditions are met: 1. Contribution to the achievement of objectives of common interest; 2. Absence of market delivery due to market failures or important inequalities; 3. Appropriateness of State aid as a policy instrument; 4. Existence of incentive effect; 5. Aid limited to the minimum necessary; 6. Limited negative effects; 7. Transparency.

<sup>836</sup> Council Regulation (EC) No 659/1999 of 22 March 1999 laying down detailed rules for the application of Article 93 of the EC Treaty [1999] OJ L 083/1, as amended by Council Regulation (EC) No. 1791/2006, Council Regulation (EU) No. 517/2013 and Council Regulation (EU) No. 734/2013.

reviewed financial and business models showing the costs of a typical, well run and adequately equipped undertaking<sup>837</sup>.

Notably, it must be secured to the best possible extent that the new entrant is a credible entity, capable of acting as the maverick player in the oligopoly game, who is willing to invest heavily in the inefficient market. It is important to note that the new entrant must commit to invest in the same market as the market of operation of the tacitly coordinated players for the provision of the same or value added services, not in similar or neighboring markets, as in the latter case the aim of having a new player capable of exerting competitive pressure on the collectively dominant undertakings would be compromised.

Undoubtedly, these suggestions merit a lot more thought, particularly from an economic aspect. The setting of the appropriate penalty, which will have to be at a level such that it is capable to deter the oligopolists from refusing access but at the same time proportional to the type of market failure detected by NRAs is a very difficult exercise<sup>838</sup>. The economic implications of this suggestion necessitate the investigation of a cost and benefit analysis which is beyond the scope of this thesis. However, it is considered that the foregoing suggestions are worthy of being explored.

## **5.5. Conclusions**

The analysis of the present chapter has demonstrated that the categories of remedies discussed should be applied with caution in oligopolistic markets, whereas the effectiveness of functional separation in oligopolistic environments is debatable.

Transparency, non-discrimination and accounting separation obligations are essentially one and the same measure, but their application may create additional distortions in

---

<sup>837</sup> Arguments taken from Case C-280/00 *Altmark Trans* [2003] ECR I-7747.

<sup>838</sup> The general principle in antitrust is that fines or damages should equal external harm times a probability multiplier, in the simplest case equal to one divided by the probability that sanctions will be imposed. For example, if firms contemplating price fixing anticipate that there is only a 50 percent chance of being caught and fined, fines should (at least somewhat) exceed twice any profits, for otherwise their activities will be profitable even taking into account expected sanctions (Kaplou, L., *ibid.*).

oligopolistic environments. Transparency obligations create the risk of causing the opposite result of their intended purpose, since they are likely to further collusion rather than prevent it by allowing the operators to observe each other's charges and making cooperation easier, hence, should be applied with caution and focus on issues that may bring factors capable of preventing collusion into light.

The indispensability of transparency for the application of non-discrimination obligations also impairs the efficiency of the latter on oligopolistic markets. In addition, non discrimination obligations enhance stability and similarity in cost structures, which is considered a further factor inductive to tacit collusion. Non-discrimination obligations should be treated with caution in the context of regulation of oligopolistic markets also because excuses supporting a transaction-specific efficiency defence under general competition law principles, are easier to find in a complex oligopolistic environment with no monopoly equilibrium. The collusive access price may already be non discriminatory, whereas discriminatory pricing or selective price-cutting by one of the undertakings may mean that price competition is in fact operating between the oligopolists.

The direct association of accounting separation with the obligations on transparency and non-discrimination suggests that problems similar to that identified in relation to transparency and non-discrimination also apply in this area regarding co-ordinated effects and the possible promotion or facilitation of tacit collusion through the imposition of obligations on accounting separation; the exchange of business information may be facilitated and, consequently, the sustainability of a common position towards competitors and consumers. However, the downsides of the measure may be mitigated if the information is not disclosed by NRAs to third parties.

Finally, functional separation is not considered appropriate for the regulation of oligopolistic network markets. On top of the generally known risks entailed in structural separation (risk of welfare losses and particularly of the concern that the remaining set of functions will not operate as incentive to innovate), the efficiency of structural separation for the purposes of regulating oligopolistic markets is disputed further, because of the increased transparency created through the separation of operations. Also, economists have challenged the effectiveness of structural remedies

in oligopolistic environments on the grounds that inappropriate divestments may actually facilitate collusion by restructuring an industry in a more symmetric way.

Access obligations are inevitable for the regulation of SMP in electronic communications. However, they enhance co-operation between the undertakings involved and, as such, facilitate the exchange of information between competitors and, thus, collusion, which may eventually reduce the efficiency of their several application in oligopolistic environments. Economic analysis has shown that entry through access obligations, if they are not complemented by some form of price regulation, may also lead to higher prices, particularly in markets with more than two players or where there is already collusion between the oligopolistic players.

The foregoing remarks should be made clear in a future revision of the Access Directive or of the Guidelines.

As an alternative, it is worthy of exploring with further economic analysis the option of imposing penalties on collectively dominant undertakings and applying the receivables of such penalties for the financing of network roll-out by new entrants. On condition that such scheme could obtain the required prior consent under Article 107(3) TFEU, the suggested option may exercise competitive pressure on the oligopolists, since there is general consensus that the most credible pressure in anti-competitive oligopolies may be exercised by new entry.

In closing, it should be borne in mind that there should be no absolute approach against intervention at retail level in oligopolistic situations (unless measures at wholesale have proved insufficient), because measures taken at retail may be capable of remedying anti-competitive practices at wholesale level, in oligopolies where the same players are active both at wholesale and retail level and the effects of collusion at wholesale are passed on to retail customers directly.

# Chapter 6: The effectiveness of Available Remedies in oligopolistic contexts – Part II: Price control

---

## **6.1. Prices, telecoms and oligopolies**

In closing the review of the applicable SMP framework in electronic communications, the present chapter examines pricing measures as the last category of remedies provided under SMP regulation. According to Article 13 par. 1 of the Access Directive these are applied if NRAs detect margin squeezes or excessive pricing in the course of their market assessments. The analysis of the present chapter will show that margin squeezes or predation is unlikely to occur in oligopolistic markets. If pricing remedies are necessitated, they will be probably required against excessive pricing. In such cases, there may be oligopolistic markets where pricing regulation may be more efficient than other behavioural remedies, albeit conclusion on this cannot be reached without further economic analysis. This is discussed in the first section.

The chapter then turns to the discussion around margin squeezes and excessive pricing on the basis of competition law precedents and closes with the description of the methodologies available for the application of pricing measures in electronic communications. The research has not revealed the existence of specific economic analysis on the method of optimum price regulation in oligopolistic markets in electronic communications, which indicates that economic research on the subject may be warranted, if the Commission decides to regulate specific electronic communications markets in the future.

## **6.2. Price regulation as the last resort**

The European Commission has been reluctant in regulating market prices under EC competition law rules to avoid embarking on the role of a regulator<sup>839</sup>. The effectiveness of price regulation is challenged, on the one hand, because it comprises direct intervention in market prices and the potential distortion of competition, and, on the other hand, because it may lead regulated firms to compromise quality in their attempt to maintain profitability<sup>840</sup>. This is in line with economic theory, which takes the view that introducing effective competition in the market is a far more efficient way of imposing downward pressure on prices than imposing direct controls on such prices<sup>841</sup>. The 50-year history of cable TV in the US, where retail rates have been regulated and deregulated a couple of times, is taken as an example, which is said to support the conclusion that rate regulation does indeed lower nominal rates, but at the cost of lowering service quality; subscribers were said to have generally believed they were worse off with price controls, in part because of reductions in investments for marketing and capital infrastructure by operators<sup>842</sup>.

In its 1<sup>st</sup> report on the Commission proposal for the Access Directive, the Committee on External Trade, Research and Energy expressed the view that pricing obligations and particularly cost-orientation should be refrained from being enforced whenever there is a potential for achieving competition:

“Price controls should only be imposed as a last resort, where effective market analysis has shown that there is an existing and enduring market failure with no prospect of competition in the long term. ...Otherwise, the cost orientation obligation would send the wrong signals to the market, preventing competition from developing in a balanced way and would consequently harm investments and innovation.”<sup>843</sup>.

---

<sup>839</sup> Kon, S., Turnbull, S., *Pricing and the Dominant Firm: Implications of the Competition Commission Appeal Tribunal's Judgement in the Napp Case*, [2003] ECLR, 70. Refer also to European Commission, *Fifth Report on Competition Policy*, 1975, par. 76.

<sup>840</sup> Ezrachi, A., *Behavioural Remedies in EC Merger Control – Scope and Limitations*, [2006] World Competition, 474.

<sup>841</sup> Geradin, D., Kerf, M., *Controlling Market Power in Telecommunications*, 2003, OUP, 332.

<sup>842</sup> Bittlingmayer, G., “Open Access:” *the ideal and the real*, [2002] 26 Telecommunications Policy, 302 – 308.

<sup>843</sup> Justification to Amendment 42 and 43.

The proposed amendment was accepted and the Access Directive incorporated this principle, albeit with a less stringent wording requiring evidence of actual lack of competition for the application of price controls<sup>844</sup>.

The ERG have identified as the key problem with pricing remedies the setting of the appropriate price control level, which facilitates services competition without reinforcing network market power, and the associated distortion which can result from setting charges too low or too high<sup>845</sup>.

However, in the words of Geradin and Kerf,

‘price regulation does remain necessary, as long as competition cannot be relied upon to introduce sufficient market discipline on the provision of certain services’<sup>846</sup>.

The review of cases involving joint dominance notified under the procedure of Article 7 of the Framework Directive shows that NRAs have not been in favour of immediate application of price control on oligopolistic markets. In Case IE/2004/121, the Irish NRA suggested the application of price control and cost orientation on mobile access and call origination if access and non-discrimination obligations failed. In MT/2006/0443, the Maltese NRA decided to apply cost-orientation in the event of failure of general obligations on mobile operators on price control, which, in turn, would apply only if the negotiations on access obligations between SMP and non-SMP operators failed. In ES/2005/330, the Spanish NRA imposed on the mobile operators the general obligation to apply reasonable prices and in SI/2008/806 the Slovenian NRA opted in favour of a price cap for mobile access and call origination, which was never applied because the notification was subsequently withdrawn following the Commission’s expression of serious doubts.

Economic analysis has supported that price regulation in oligopolistic markets is welfare-impairing because while sellers did not typically converge to a readily

---

<sup>844</sup> Article 13(1) of the Access Directive: “ A national regulatory authority may ... impose obligations relating to cost recovery and price controls, ... where a market analysis indicates that a lack of effective competition means that ...”.

<sup>845</sup> The ERG Common Position on SMP Remedies, 54.

<sup>846</sup> Geradin, D., Kerf, M., *ibid.*.



characterised equilibrium in the unregulated phase, regulation leads to a rapid convergence to a regulated Cournot, Stackleberg or collusive solution<sup>847</sup>. Economists have also expressed concerns, because of collective rate-making; notably that, in most cases of price regulation, the initiation of price proposals for price regulation comes from the regulated firms, not the regulator. This, in turn, creates room for further co-ordination between the regulated parties<sup>848</sup>.

However, other economic studies have shown that under oligopolistic competition and Cournot equilibrium in particular, where firms know the true value of the marginal cost, price regulation may be more efficient than the free market<sup>849</sup>. They argue that in oligopolistic industries with high marginal costs, price regulation is the optimal policy, because in this case the regulator faces very little uncertainty. When the difference between high and low marginal costs between firms is low, the optimal policy is to set a regulated price equal to the value of the large marginal cost. When there is difference between the high and low marginal costs, the optimal policy is to set a regulated price equal to the value of the low marginal cost<sup>850</sup>. When the intercept of the demand function is close to the high value of the marginal cost, the best policy is a regulated price equal to the low value of the marginal cost, since, if costs are high, loss is small. When the intercept is very large the best policy is a regulated price equal to the high value of the marginal cost in order to secure positive output whatever happens<sup>851</sup>.

---

<sup>847</sup> Daughety, A., Forsythe, R., *The effects of industry-wide price regulation on Industrial Organisation*, [1987] *Journal of Law, Economics & Organisation*, vol. 3, No. 2, 400.

<sup>848</sup> *Ibid.*, 398.

<sup>849</sup> Corchon, L., Marcos, F., *Price Regulation in Oligopoly*, University Carlos III of Madrid Working Papers, Economic Series, January 2010.

<sup>850</sup> Corchon, L., Marcos, F., *ibid.*, 3.

<sup>851</sup> *Ibid.* Indeed, the motivation of this study by Crochon and Marcos was that price regulation has been used to regulate oligopolistic markets like gasoline, natural gas, electricity generation, pharmaceuticals etc. Also, Tyers, R., *Service Oligopolies and Australia's Economy-Wide Performance*, at [http://www.business.uwa.edu.au/data/assets/pdf\\_file/0005/2585102/14-18-Service-Oligopolies-and-Australias-Economy-Wide-Performance.pdf](http://www.business.uwa.edu.au/data/assets/pdf_file/0005/2585102/14-18-Service-Oligopolies-and-Australias-Economy-Wide-Performance.pdf) argues that relative to a baseline with full exploitation of their oligopoly power, the minimization and redistribution of oligopoly rents in privatized services industry, including telecommunications, collectively raises real wages by 14 per cent and depreciates the real exchange rate by six per cent. Thus, price caps in these industries are shown to have significant effects of the performance of other sectors and the economy as a whole.

Do the findings of the economic studies referred above on the appropriateness of pricing regulation in oligopolistic industries with competition problems apply also in the electronic communications industry, despite the difficulties entailed in the identification of marginal costs in telecommunications? The conducted research has not been able to provide the thesis with an answer, since relevant studies on industries with incremental pricing have not been identified. The last section of this chapter discusses the unsuitability of marginal cost pricing in electronic communications is related to the difficulties linked with the identification of marginal cost as well as to the need to maintain reasonable profit for the operators to enhance investment. This does not mean that marginal cost does not exist in electronic communications services, but it is more difficult to identify than in other industry markets. The adoption of incremental pricing as an alternative to marginal cost pricing in the telecommunications industry reinforces this view.

Hence, the foregoing suggest that there may be oligopolistic markets where pricing regulation may be more efficient than other behavioural remedies, albeit the setting of the appropriate price level may be more complicated than in industries where marginal cost pricing is considered the suitable pricing method. The case of excessive international roaming rates that was discussed in chapter 4 makes the same point. Roaming rates have been significantly reduced since the introduction of the first roaming regulation, as a result of outright price regulation; at the same time concerns on prospective total welfare losses resulting from forecasted increases in national rates did not materialise. If it is considered that termination markets may be the result of competition inefficiencies in oligopolistic markets, as suggested under section 2.2.2.2, the successful regulation of high termination rates through price regulation and the resulting consumer welfare makes also the same point.

However, conclusions on this principle cannot be reached without further economic research particularly on the parameters of industries where marginal cost pricing is not considered suitable pricing option.

## 6.3. Exclusionary pricing practices

### 6.3.1 Price Squeezes

According to Article 13 par. 1 of the Access Directive, NRAs may impose obligations relating to cost recovery and price controls for the provision of specific types of interconnection and/or access, if the market analysis indicates lack of effective competition because the operator concerned may either sustain prices at excessively high level, or may apply a price squeeze, to the detriment of end-users.

A price squeeze may arise when a vertically integrated undertaking, with a dominant position in the provision of an essential upstream input, prices that input (and/or the downstream service relying on this input) in such a way as to deny an equally or more efficient downstream rival a normal profit over the long period<sup>852</sup>. Price squeezes are generally considered part of cross-subsidisation practices, occurring where an undertaking uses revenues from one market to subsidise losses in another market. Competition problems may arise when, for cross-subsidisation purposes, the undertaking uses revenues from a market where it is dominant.

Price squeeze resembles to predation, as they both aim at driving the competitor out of the market through the setting of prices that the latter cannot sustain<sup>853</sup>. However, unlike predation, where the recoupment occurs in the long run, price squeeze does not necessarily involve initial losses<sup>854</sup>. Also, under price squeeze practices, the focus is on the difference between the upstream and the downstream price and not the price level

---

<sup>852</sup> Garzaniti, L., Liberatore, F., *Recent Developments in the European Commission's Practice in the Communications Sector*, Part 1, [2004] ECLR, 172.

<sup>853</sup> Some scholars have expressed the view that price squeezes are not to be distinguished from predatory and excessive pricing, Tarrant, A., *Accounting Separation: The Hole in the Heart of the EU Telecommunications Regime*, [2003] ECLR, 278f., footnote 5. However, it appears that the European Commission has distinguished the terms and the tests applied to establish price squeezes are different from the tests suggested for predatory and excessive pricing. OFT's position is in line with the position of the European Union. In *BTOpenworld*, OFT distinguished between predation and margin squeezes, among other, on the grounds that predation involves a trade-off for the predator between short-term losses and long-term profit, whereas margin squeezes involve a trade-off of losses and profit between different businesses of the vertically integrated undertaking (refer to par. 3.33 – 3.34 of the decision).

<sup>854</sup> Crocioni, A., *Price Squeeze and Imputation Test*, [2005] ECLR, 558, Fernandez Alvarez-Labrador, M., *Margin Squeeze in the Telecommunications Sector: An Economic Overview*, [2006] World Competition, 252.

of the upstream input *per se*. This involves an imputation test, which aims at determining whether net downstream margins are profitable<sup>855</sup>.

Predation is equivalent to pricing below cost. This, in itself does not comprise anti-competitive practice, unless if carried out systematically and with the intention of driving a competitor out of the market<sup>856</sup>. Noting the importance of a cost-based approach, the CJEU established in *AKZO* the following two-fold test<sup>857</sup>:

- prices set at below average variable costs are presumed to be predatory;
- prices set at below average total costs, but above average variable costs will be predatory, if some documentary evidence of intention to eliminate a competitor can be demonstrated; such intention is also presumed in case of systematic practice of selling below average total cost<sup>858</sup>.

The *AKZO* test has been criticised for various reasons, including the inherent difficulties in determining the average variable costs<sup>859</sup>. Further, firms cannot be held responsible for conducting anti-competitive predatory pricing, if their market power is such that it does not allow them to recoup for the losses resulting from predation<sup>860</sup>. Pricing below average total costs may be due to the firm's facing a temporary slack in demand for any reason, including the efficiency of a competitor. In such case, any price may assist the firm in recouping losses<sup>861</sup>. In addition, in industries with high investment costs, a firm's pricing policy depends particularly on the amortisation

---

<sup>855</sup> Garzaniti, L., Liberatore, F., *ibid.*, 172-173.

<sup>856</sup> European Commission's Decision of December 15, 1985, *ECS/AKZO* [1985] OJ L374/1, par. 75.

<sup>857</sup> Case C-62/86, *AKZO Chemie BV v. Commission* [1993] 5 CMLR, 215.

<sup>858</sup> Refer also to Case C-333/94 *Tetra Pak International v. Commission* [1996] ECR I-5951. Section 2 of the Sherman Act requires the recoupment of temporary losses in predation through higher profits earned in the absence of competition, refer to Areeda, P., Turner, D., *Predatory Pricing and Related Practices under Section 2 of the Sherman Act*, [1975] 88 Harv.L.Rev., 705.

<sup>859</sup> Kon, S., Turnbull, S., *ibid.*, 74-75.

<sup>860</sup> European case-law has not yet required proof that the dominant undertaking is able to recoup its losses for a predatory pricing to occur. However, the significance of this element was recognised by the European Regulators Group, in the ERG Common Position on SMP remedies, 100. Also, Garzaniti, L., Liberatore, F., *Recent developments in the European Commission's Practice in the Communications Sector*, Part 2, [2004] ECLR, 235. It must be noted, though, that scholars have also argued that if dominance is understood in its dynamic economic context of high barriers to entry and expansion by actual and potential competitors, i.e. translated in a weakened competitive process, this should suffice to establish the likelihood of recoupment, Moura e Silva, M., *Predatory Pricing under Article 82 and the Recoupment Test: Do not go gentle into that Good Night*, [2009] ECLR, 66.

<sup>861</sup> Nicolaidis, Ph., Polmans, R., *Competition in EC Telecommunications: Cross-Subsidisation, Access and Predatory Pricing*, [1999]4 World Competition, 26-27.

periods that are taken into account<sup>862</sup>. Short amortisation periods may lead to assumptions on predation, where the firm has decided to make profit in the late life of the investment. Finally, in emerging markets it may be a commercially sensible behaviour to launch a new product or service at a price below average variable costs in order to create an initial phase of awareness for the new product or service<sup>863</sup>.

In the case law post *AKZO*, the test was upheld, although it was made clear by the CJEU that the specific circumstances of each case must be considered<sup>864</sup>. In *Napier Brown/ British Sugar*<sup>865</sup>, the Commission set out the following conditions precedent for a price squeeze to occur:

- non-effective competition in the downstream market;
- the upstream service should qualify as an essential facility for the downstream service, provided in fixed proportions;
- access to the upstream service must be controlled by the vertically integrated dominant undertaking;
- the downstream firm must be equally or more efficient than the vertically integrated downstream competitor;
- the price squeeze must have occurred over a sufficiently long period of time (persistence).

In *Deutsche Post*<sup>866</sup>, the specific circumstances for network industries with high fixed costs and low variable costs, like telecommunications, were held to comprise consideration of the relationship between the costs of maintaining capacity and the incremental costs of providing the particular service using an avoidable cost standard. In the same line of thinking, the European Commission recognised in the Access Notice that in network industries, like telecommunications, the price equating to

---

<sup>862</sup> The NGA Recommendation states that the importance of taking an appropriate timeframe into account for the calculation of margin squeezes (recital 26).

<sup>863</sup> Garzaniti, L., Liberatore, F., *ibid.* As an alternative to the *AKZO* test, the “net revenue principle” lies in the firm demonstrating that it makes a combined profit from the sale of different products, of which at least one is priced predatorily, to the same customer. The net revenue principle was adopted in *Napp Pharmaceutical Holdings Limited v. DGFT*, [2002] 4 All ER 376. Although the Court of Appeal rejected the case on its merits, it accepted the net revenue principle. Kon, S., Turnbull, S., *ibid.*, 80, claimed that the argument could possibly succeed, where the sales of one product below cost can be expected to generate sales of complementary products and, hence, in the medium term, to increase sales.

<sup>864</sup> Refer e.g. to *Tetra Pak*, par. 20 and to Case T-228/97 *Irish Sugar plc v. Commission* [1999] ECR 2969, par. 114.

<sup>865</sup> Decision 88/518, *Napier Brown/British Sugar* [1988] OJ L284/41.

<sup>866</sup> Commission Decision of May 5, 2001, *Deutsche Post AG*, [2001] OJ L125/27.

variable costs may be lower than the price the operator needs in order to cover the cost of providing the service<sup>867</sup>.

### 6.3.2 Margin squeeze and predation in the telecommunications sector

There are several examples of predatory pricing in the telecommunications sector found in European jurisprudence, since the telecommunications markets of the former incumbents exhibit characteristics of markets susceptible of margin squeezes. A predatory squeeze may arise where the vertically integrated incumbent firm cuts the retail prices as much as possible<sup>868</sup>.

The Access Notice suggested two ways to apply an imputation test<sup>869</sup>:

- (A) Where the downstream division of the dominant vertically integrated undertaking could not “trade profitably” on the basis of the price charged to its competitors upstream. In essence, the test aims at assessing whether the vertically integrated undertaking is cross-subsidising its downstream operations<sup>870</sup>; or,
- (B) Where the difference between the vertically integrated undertaking’s retail and the wholesale input prices is not sufficient for a “reasonably efficient” downstream competitor to make a normal profit<sup>871</sup>. This test makes sense in a regulatory environment, where entry by newcomers must be encouraged in the short run, expecting that, in the long run, they will achieve a good efficient level of activity<sup>872</sup>.

---

<sup>867</sup> Par. 110-116 of the Access Notice.

<sup>868</sup> Fernandez Alvarez-Labrador, M., *ibid.*, 256.

<sup>869</sup> Par. 117-119 of the Access Notice.

<sup>870</sup> This so-called cost-allocation test seems to make more economic sense, because it is less vague in meaning and takes into account the advantages of the dominant firm resulting from vertical integration and its disadvantages vis-à-vis more efficient downstream competitors. Fernandez Alvarez-Labrador, M., *ibid.*, 260.

<sup>871</sup> Par. 117-118 of the Access Notice. The Commission does not take a clear view on whether the two tests are mutually exclusive, although an affirmative approach to this question is inferred from the Access Notice. However, some commentators have argued that the second test should be applied at all times, even if the result of the first test is positive. Garzaniti, L., Liberatore, F., *ibid.*, 174. In telecoms, competition authorities have shown a preference for the first test; examples are found in *Freeserve* (Ofel, Investigation by the Director General of Telecommunications into alleged anti-competitive practices by BT in relation to BTOW consumer broadband products, November 20, 2003) and *Deutsche Telekom*, Commission Decision of 14 October 2003, [2003] OJ L 263/9.

<sup>872</sup> Fernandez Alvarez-Labrador, M., *ibid.*, 259.

In *BTOpenworld II*, OFT applied a different test than the Commission's test (B) in the Access Notice and required proof of the wholesale input prices being insufficient for an 'equally or more efficient downstream competitor' to compete in the upstream market, but it considered the 'reasonably efficient competitor' test more appropriate to promote competition under sectoral powers<sup>873</sup>, which would be the case of electronic communications regulation. The same approach was later adopted by the Commission in the NGA Recommendation<sup>874</sup>. BEREC has underlined the increased risk of anti-competitive cross-subsidization in the NGNs environment, as a result of the higher percentage of common costs to be distributed between regulated and unregulated products<sup>875</sup>.

Price squeezes have been found to occur in some of the most controversial cases in the sector, all comprising typical demonstration of single dominance.

In *Deutsche Telecom*<sup>876</sup>, the Commission found that Deutsche Telecom was applying a margin squeeze generated by a disproportion between wholesale charges and retail charges for access to the local network. The Commission established that DT was cross-subsidising its downstream retail activities through the revenues from its upstream wholesale activities, thus charging to new entrants higher fees for wholesale access to the local loop than for retail connection to subscribers. As a result, efficient competitors could not make a normal profit in providing retail internet access services, thus were refused the scope to compete with Deutsche Telecom for end consumers. The Commission said that a margin squeeze would occur where

---

<sup>873</sup> Par. 3.23 of the decision.

<sup>874</sup> Recital 26 of the NGA Recommendation: "*Margin squeeze can be demonstrated by showing that the SMP operator's own downstream operations could not trade profitably on the basis of the upstream price charged to its competitors by the upstream operating arm of the SMP operator ('equally efficient competitor' test). Alternatively, a margin squeeze can also be demonstrated by showing that the margin between the price charged to competitors on the upstream market for access and the price which the downstream arm of the SMP operator charges in the downstream market is insufficient to allow a reasonably efficient service provider in the downstream market to obtain a normal profit (reasonably efficient competitor test). In the specific context of ex ante price controls aiming to maintain effective competition between operators not benefiting from the same economies of scale and scope and having different unit network costs, a 'reasonably efficient competitor test' will normally be more appropriate*".

<sup>875</sup> BEREC Common Statement on Next Generation Networks Future Charging Mechanisms/ Long Term Termination Issues, BoR(10) 24 Rev 1, 26.

<sup>876</sup> *Ibid* at footnote 84.

“the spread between DT's retail and wholesale prices is either negative or at least insufficient to cover DT's own downstream costs”<sup>877</sup>.

DT would have been unable to offer its own retail services without incurring a loss if it had had to pay the wholesale access price. As a consequence the profit margins of competitors would be squeezed, even if they were just as efficient as DT<sup>878</sup>. The judgement was upheld by the GC<sup>879</sup> and the CJEU<sup>880</sup>. The judgements clarified the following points:

- The fact that a dominant company's tariffs are subject to price caps approved by a national regulatory authority is not an exemption from competition law;
- The vertically integrated company's own costs are the correct benchmark to assess whether a reasonable margin is possible for competitors; and
- A comparison of the prices of the upstream input with a weighted average of the prices of the bundle of downstream services for which the upstream input is needed can provide evidence of a margin squeeze.
- A company can still be guilty of operating a margin squeeze despite compliance with national regulatory decisions
- Margin squeezes are determined by reference to the ability and the incentive of equally efficient competitors to remain on the market.

In *Wanadoo*, the Commission decided that France Telecom's internet access subsidiary, Wanadoo, had charged predatory prices for its consumer broadband internet access services<sup>881</sup>. The case was treated as one of predation, but it could have also been treated as one of margin squeeze.

The Commission found that for the period from March 2001 to October 2002, Wanadoo had charged its customers prices well below average variable costs and, at a later stage, charged prices equivalent to variable costs but significantly below total

---

<sup>877</sup> Par. 140 of the decision.

<sup>878</sup> Crocioni, A., *ibid.*, 569, questions the correct implementation of the imputation test in DT: With ULL charges set at cost by the RegTP, downstream rivals could always re-enter if DT later attempted to raise its downstream rates. Further, DT's charges for digital and ISDN narrowband network access were also regulated as being part of a basket of services subject to a retail cap.

<sup>879</sup> Case T-271/03, *Deutsche Telekom v Commission*, Judgment of 10 April 2008.

<sup>880</sup> Case C-280/08 P, *Deutsche Telekom AG v Commission* [2010] ECR I-9555.

<sup>881</sup> Wanadoo Interactive (COMP/38.233 Wanadoo Interactive, Commission decision of 16 July 2003). Commission Press Release IP/01/1899, December 21, 2001.



costs. Whilst found to have suffered substantial losses, Wanadoo's market share was found to have increased dramatically from 46% to 72% from January '01 to September '02. Significantly, that increase took place on a market that had grown five-fold in the same period.

More specifically the Commission's findings had as follows:

- (a) the losses that would have to be incurred by an undertaking wishing to compete with Wanadoo would have been prohibitively high, thereby deterring entry in the first place
- (b) the growth of competitors already in the market was hampered - none of Wanadoo's competitors held more than 10% of the market at the end of the abuse period
- (c) one competitor, Mangoosta (an ADSL service provider) went out of business; and
- (d) Wanadoo's main competitor also suffered as a result of Wanadoo's pricing practices. According to the European Commission, the French high speed internet access market grew more in the seven months after the predatory behaviour stopped than it did during the 17 month infringement period during which time Wanadoo sought to secure its position<sup>882</sup>.

In this case also, the Commission findings were upheld by the GC and the CJEU<sup>883</sup>, which confirmed that France Telecom cannot rely on any absolute right to align its prices on those of its competitors in order to justify its conduct where such conduct constitutes an abuse of its dominant position. The GC upheld the AKZO test and held that, as the choice of the method to calculate the rate of recovery of costs entails a complex economic assessment on the part of the Commission, the Commission must be afforded a broad discretion<sup>884</sup>.

In *Telefonica*, the Commission in its 2007 investigation and decision found that Telefonica had inflated the price it sold wholesale broadband access to its competitors

---

<sup>882</sup> Refer also to <http://www.ffw.com/publications/competition/july2003.aspx>. To prevent future abuse, Wanadoo has had its accounts on ADSL services placed under European Commission surveillance until the end of 2006. The decision was upheld both by the GC in its Judgement of January 30, 2007, Case T-340/03 and the CJEU in its Judgement of April 2, 2009, *France Telecom v. Commission*, Case C-202/07.

<sup>883</sup> Case C-202/07 P, *France Télécom SA v Commission*.

<sup>884</sup> Case T-340/03 *France Télécom v Commission* [2007] ECR II-107, par. 129 of the judgement.

to a level where they could not effectively compete with Telefonica's own prices to its retail customers. The Commission held this was in breach of Article 102 TFEU as Telefonica was held to be in a dominant position on the Spanish wholesale broadband market, since it was the only operator in Spain with a nation-wide fixed telephone network. By charging this high wholesale price, competitors were forced to price their own retail customer prices at such a level they could not effectively compete or gain market share from Telefonica. The GC upheld the Commission's findings<sup>885</sup>.

In *TeliaSonera*<sup>886</sup>, the Commission established at a preliminary stage abuse by the Swedish operator, when the latter was found to have predatorily priced a contract for the creation of alternative infrastructure for the provision of broadband services with the aim of preventing alternative providers to enter the network market<sup>887</sup>. The CJEU explained that in ADSL broadband services a margin squeeze may occur, inter alia, where

‘the spread between the wholesale prices for ADSL input services and the retail prices for broadband connection services to end users were either negative or insufficient to cover the specific costs of the ADSL input services which TeliaSonera has to incur in order to supply its own retail services to end users, so that that spread does not allow a competitor which is as efficient as that undertaking to compete for the supply of those services to end users’<sup>888</sup>,

but required evidence of effect on the competitive situation of competitors, in order to classify a margin squeeze as an exclusionary practice, i.e. evidence that the penetration of competitors in the market concerned is made more difficult by that practice<sup>889</sup>.

All the cases referred in the present and the previous sub-section on margin squeezes involved abuses of single dominance. In fact, the theoretical connection of the conditions precedent to the application of a price squeeze to essential facilities indicates that the concept of price squeeze is linked to single dominance<sup>890</sup>.

---

<sup>885</sup> Case T-336/07, *Telefónica, SA and Telefónica de España, SA v Commission* [2012]

<sup>886</sup> Case C-52/09, *Konkurrensverket v TeliaSonera Sverige AB* [2011] ECR I-527.

<sup>887</sup> IP/03/1797, December 17, 2003.

<sup>888</sup> Par. 32 of the judgement.

<sup>889</sup> Par. 66 of the judgement.

<sup>890</sup> Refer for details to section 4.3.3, where it was explained that the essential facilities doctrine is unsuitable for oligopolistic markets.

Commentators have also argued that for a price squeeze to occur, the undertaking concerned must hold a position more akin to super dominance<sup>891</sup>.

There is a higher degree of uncertainty in carrying out an imputation test in oligopolistic markets due to the additional number of undertakings under scrutiny; this adds also practical difficulties to the prospective application of the test on oligopolistic markets. The relevant difficulties were recognised in the Discussion Paper:

“Companies that are collectively dominant are less likely to be able to predate because it may be difficult for the dominant companies to distinguish predation against an outside competitor from price competition between the collective dominant companies and because they usually lack a (legal) mechanism to share the financial burden of the predatory Action”<sup>892</sup>.

Indeed, the potential abuses investigated under the notifications to the Commission pursuant to Article 7 of the Framework Directive involving collective dominance did not refer to price squeezes or predatory pricing, which reiterates that this is an issue concerning mainly single dominance. Hence, price controls may be relevant in the context of regulation in oligopolistic markets to the extent that excessive pricing is required to be addressed.

### **6.3.3 Excessive Pricing**

The approach of Article 13 par. 1 of the Access Directive to price controls and in particular the distinction between price squeezes and excessive prices reflects the corresponding difference between exclusionary and exploitative abusive conduct in competition law. Albeit the literal reading of Article 102 and particularly par. (a) covers exploitative abuses<sup>893</sup>, there have been increasing trends in antitrust theory that competition law should focus on the exploitative conduct and generally leave it to the marketplace to remedy the exclusions. The same views support that

---

<sup>891</sup> Whish, R., *Competition Law*, 4<sup>th</sup> edition, OUP, 2001, 652.

<sup>892</sup> Par. 98 of the Discussion Paper.

<sup>893</sup> “Such abuse may, in particular, consist in: (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;”.

‘competition enforcers should not be minded to help individual competitors, and should not see themselves as horse race handicappers whose notion of perfect competition is a robustly contended race whose winner is uncertain’<sup>894</sup>.

The European Commission and the CJEU have been very reluctant in establishing anti-competitive practices on the basis of excessive pricing, as the latter contains in itself an element of subjectivity, thus rendering pricing decisions unstable. Past experience of the application of Article 102 has shown that it is not easy to decide whether a price is excessive in relation to the economic value of the service provided<sup>895</sup>. The Guidance Paper covers only exclusionary abuses<sup>896</sup>. It does not discuss exploitative abuses, such as excessive pricing or discriminatory conduct, making it clear that such abuses, including excessive pricing, do not constitute enforcement priorities of the Commission. However, the Competition Committee of the Directorate for Financial and Enterprise Affairs explained in a subsequent paper that there are reasons for intervening against exploitative conduct, including the need to intervene in cases where intervention against exclusionary conduct may legally not be possible<sup>897</sup>.

The CJEU refused to condemn high levels of prices as such, but decided to pursue excessive pricing, if the prices were excessive in relation to the economic value of the services provided and if it has the effect of either curbing parallel trade or of unfairly exploiting customers, thus launching an element of objectivity in an essentially subjective assessment<sup>898</sup>. For these reasons there has been relatively little examination of excessive prices on the part of the Commission and the case law of the European Courts is not particularly helpful in this regard either<sup>899</sup>. According to economic analysis, prices can be considered excessive if they allow the undertaking to sustain profits higher it could expect to earn in a competitive market (super-normal profits)<sup>900</sup>.

---

<sup>894</sup> Forrester, I., *Sector-specific Price Regulation or Antitrust Regulation A Plague on Both Your Houses?*, [2007] European University Institute Papers, 6.

<sup>895</sup> Refer, e.g. to Case 26/75 *General Motors Continental NV v. Commission* [1975] ECR 1367.

<sup>896</sup> Paragraph 7 of the Guidance Paper.

<sup>897</sup> Directorate for Financial and Enterprise Affairs, Competition Committee, *Excessive Prices*, [2011] DAF/COMP/WP2/WD(2011)54, par. 2-8, albeit the Committee recognized the need to apply resources mainly in cases of exclusionary conduct.

<sup>898</sup> Kon, S., Turnbull, S., *ibid.*, 82. The scholar’s remark is based on the CJEU’s approach to *General Motors*.

<sup>899</sup> Garzaniti, L., *ibid.*, 2<sup>nd</sup> edition, 2003, 86.

<sup>900</sup> The ERG Common Position on SMP remedies, 37.

In *United Brands*, the Court established that the following conditions should be met cumulatively for a price to be excessive<sup>901</sup>:

- the difference between the costs and the price charged should be excessive; and
- the price should be unfair in itself or when compared to competing products<sup>902</sup>.

In *British Leyland*<sup>903</sup> the CJEU upheld the Commission's findings that the discriminatory fee charged to car dealers for the issue of certificates of conformity for vehicles, entailing simple administrative costs was disproportionate to the economic value of the service provided, hence constituted a monopoly abuse. In *SACEM*<sup>904</sup>, the Court held that Article 102 must be interpreted as meaning that a dominant undertaking imposes unfair conditions where the royalties charged for the same service are appreciably higher than those charged in other Member States and where the rates are compared on a consistent basis, unless there is sufficient justification.

In *Scandlines*<sup>905</sup> the Commission applied the test of *United Brands* as well as the Commission's findings on the difficulties to establish the excessiveness of a price-cost margin, since there is little guidance as to whether a price is unfair when comparisons are drawn, if it is possible to make such comparisons at all<sup>906</sup>. In fact, if the high profit margin results from the dominant company being very efficient, it cannot be said that the prices are unfair in themselves; hence a comparison of the prices of the dominant company with the costs of other companies, for instance with the costs of the next most profitable competitor<sup>907</sup>.

---

<sup>901</sup> Case 27/76 *United Brands v. Commission* [1978] ECR 207, par. 252.

<sup>902</sup> The element of subjectivity is inherent in the concept of excessive pricing with respect to both the definition of "excessive" and of "unfairness". The uncertainty created by such subjectivity is the reason for the traditional refusal of the US Courts to establish anti-competitive behaviour in excessive pricing, *US v. DuPont de Nemours & Co*, [1953] 118 F.Supp. 41, 208.

<sup>903</sup> Case 226/84, Judgment of the Court of 11 November 1986, *British Leyland Public Limited Company v Commission of the European Communities*.

<sup>904</sup> Joint Cases 110/88, 241/88 & 242/88, *F. Lucazeau v Société des Auteurs, Compositeurs et Editeurs de Musique*.

<sup>905</sup> Case COMP/A.36.568/D3 – *Scandlines Sverige AB v Port of Helsingborg*.

<sup>906</sup> Lamalle, M., Lindstrom-Rossi, L., Teixeir, A., *Two important rejection decisions on excessive pricing in the port sector*, [2004] 3 Competition Policy Newsletter, 40-43. Refer also to Akman, P., Garrod, L., *When are excessive prices unfair?*, CCP Working Paper 10-4, <http://competitionpolicy.ac.uk/documents/107435/107587/1.150484!ccp10-04.pdf>, who suggest the principle of dual entitlement as the basis for defining a price as unfair relative to other comparable prices is in line with the goal of an effective prohibition of excessive prices.

<sup>907</sup> Directorate for Financial and Enterprise Affairs, Competition Committee, *ibid*, par. 47.

In oligopolies Professor Whish and Sufrin have proposed holding abusive excessive prices charged by tacitly collusive oligopolists<sup>908</sup>. The abuse targets the unfairly high price levels imposed by oligopolists on their customers and is based on the wording of Article 102(a) TFEU. It thus seems acceptable under the existing legal framework, but, according to Petit,

‘Forbidding excessive price levels in collusive oligopolies has little interest. As long as the conditions of tacit collusion subsist, oligopolists will grope for the next lower (and lawful) supra-competitive level. Under the so-called “*folk theorem*”, there are indeed rafts of anticompetitive equilibria in tacitly collusive oligopolies. Professors Whish and Sufrin proposal is thus only likely to achieve distributional transfers from producers to customers, by slightly reclining the tacitly collusive equilibrium. Surely, this mitigates the magnitude of the anticompetitive effects caused in the market place. But, it will not dispel the remaining allocative (price), productive (costs) and dynamic (innovation, investments, products) inefficiencies inflicted by tacit collusion’<sup>909</sup>.

In telecoms, excessive pricing may occur both at retail and at wholesale level. In fact, the Commission has launched proceedings in several cases, like international leased lines and termination rates<sup>910</sup>. Unlike predation, excessive pricing may be found occur in collective dominance cases<sup>911</sup>. The twelve cases notified under Article 7 of the Framework Directive on wholesale international roaming were initiated from concerns following complaints for excessive rates at retail level. If it is accepted that the history behind roaming regulation supports the assumption that the SMP regulation has possibly failed to address issues of collective dominance in wholesale roaming markets, according to the discussion in chapter 4, international roaming is also

---

<sup>908</sup> R. Whish and B. Sufrin, *Oligopolistic Markets and Competition Law*, [1992] 12 *Yearbook of European Law*, 75.

<sup>909</sup> Petit, N., *ibid.*, 67. In support of this submission it is reminded from the analysis of chapter 4 on international roaming that by expiry of the extended term of Roaming Regulation which imposed price caps on wholesale and retail international roaming services, rates dropped below, but close to regulated price caps. Such rates were estimated that they were still on average at least 118% higher than their underlying costs.

<sup>910</sup> Following complaints by other operators, the Commission had opened sector inquiries into the prices charged by incumbents in various member states for the provision of international leased lines. and for termination rates from fixed to mobile networks and vice-versa. Both cases were closed, as in most cases under investigation, prices declined significantly in the course of the inquiry IP/99/786, October 22, 1999, IP/99/298, May 4, 1999.

<sup>911</sup> It is reminded from the analysis of section 1.1.1 that under the Bertrand model, firms chose their price level, which may be excessive.

demonstration of excessive pricing in oligopolistic electronic communications markets, which was dealt with through the imposition of price caps on wholesale and retail international roaming services.

## **6.4. Main pricing elements of the telecommunications industry**

### **6.4.1. General concepts of cost**

This last section will discuss elementary cost issues of the electronic communications industry and their approach through SMP regulation. The principles applied are the same for single and joint SMP.

The telecommunications industry, like most network industries, displays particular economic characteristics. These include its multi-product nature; the non-storability of its services, time-varying demands and capacity constraints, high fixed and sunk costs, the existence of externalities between users, natural monopoly elements and its complex vertical structure<sup>912</sup>. These characteristics affect the cost structure of telecommunication networks and services.

The appropriate definition of costs is crucial in any regulated industry, because there are different kinds of costs that interact and potentially affect competition in the market and also influence regulatory choices.

In general, costs are either fixed or variable with respect to the quantity of output. The degree of variability depends on the units of output and the time length of operation. In the long term, whose length varies from one process to another, all costs are variable. Thus, all production costs exhibit both some fixity and some variability over certain levels of output and during certain lengths of time<sup>913</sup>.

Costs are also distinguished into sunk and avoidable costs. A cost is avoidable if it does not have to be incurred once the operation terminates. Normally, variable costs

---

<sup>912</sup> Correa, L., *The Economics of Telecommunications Regulation*, in Walden, I. (ed.), *Telecommunications Law*, Sweet & Maxwell, London, 2002, 31.

<sup>913</sup> Nicolaidis, Ph., Polmans, R., *Competition in EC Telecommunications: Cross-Subsidisation, Access and Predatory Pricing*, [1999]4 *World Competition*, 23-24.

are avoidable, but this is not always the case. Costs, which are not avoidable, are sunk. These are defined in the US merger guidelines as

“the acquisition costs of tangible or intangible assets that cannot be recovered through redeployment of these assets outside the relevant market”.

Namely, a sunk cost has to be incurred for the operation to begin, but its termination results in no reimbursement or recovery of the initial outlay<sup>914</sup>.

The addition to total cost from one extra unit of output is the “marginal” cost. The calculation of the marginal cost is used as the basis for the application of various pricing systems (marginal pricing). Economists have favoured marginal pricing, because it is said to result in efficient allocation of resources and, in addition, in the long term, it induces firms to produce at the point at which average cost is minimised. A profit-maximising firm, whether operating in competitive conditions or not, would set the price at the level where its marginal revenue is equal to its marginal cost. If the firm also incurs fixed costs, then, under competitive conditions, its marginal revenue (and its marginal cost) would be equal to the average of fixed and average variable costs (unit costs)<sup>915</sup>.

The significance of marginal pricing is also depicted in the implications of prices that are not equal to marginal cost:

“If the price is *less than marginal cost*, consumers are thereby encouraged to purchase that product even if their personal valuation of the good is less than the cost of supplying it – this will lead to inefficient over-consumption.

If the price is *above marginal cost*, some consumers will be put off from buying it by the high price even though they valued the product higher than its cost of supply – this leads to inefficient under-consumption of the good”<sup>916</sup>.

of data services, all cause the costs of voice per minute to fall and the decrease of the absolute difference in cost per minute between fixed and mobile<sup>917</sup>.

---

<sup>914</sup> *Ibid.*, 24.

<sup>915</sup> *Ibid.*, 26.

<sup>916</sup> Ridyard, D., Exclusionary Pricing and Price Discrimination Abuses under Article 82 – An economic Analysis, [2002] ECLR 286.

<sup>917</sup> *Ibid.*, 48.



Second, for networks which normally enjoy significant economies of scale the marginal cost would lay below average cost, hence it would not lead to full cost recovery. And, third, incumbents need to make out some profit so as to be encouraged to invest in upgrading the network<sup>918</sup>.

The fixed costs of telecom services result primarily from providing customer access (i.e. connection) to the networks. Variable costs depend on the volume of traffic on the network. These costs include expenditures to operate switches and carry signals, as well as a small portion of billing and collection expenses.

The difference in the level of expenditure involved in both fixed and sunk costs and in variable costs incurred mainly by network operators is noticeable. The telecom sector is comparatively capital intensive as far as networks are concerned, and particularly the access network, which is estimated to cover between one third and one half the investment costs. This is despite the fact that investment goals, such as electronic equipment, cables and wires, whose costs plays a diminishing role compared with the cost of the work needed for their installation, have become cheaper over the past years<sup>919</sup>.

Hence, one of the major problems in the economics of the telecom industry is the allocation of fixed costs to the user (end-user or other operator) for providing access to the network. Marginal cost pricing retains some desirable properties, but in a dynamic context, it has been criticised for failing to remunerate the firm's fixed costs for several reasons. First, the marginal cost is not easy to determine because of the multi-product nature of the industry. In such multi-product industries, it may not be always possible to attribute precise costs to specific products, because the main reason of existence of multi-product firms is precisely to achieve cost-savings, cost-sharing etc.<sup>920</sup>. It is also noted that Next Generation Networks entail changes in cost structure towards a higher

---

<sup>918</sup> Nicolaides, Ph., Polmans, R., *ibid.*

<sup>919</sup> Falch, M., Cost and Demand Characteristics of Telecom Networks in Melody, M. (ed.), *Telecom Reform: Principles, Policies and Regulatory Practices*, DTU, Lyngby, 1997, 108-112. In its 2005 Communications Review, Ofcom also underlined the decrease in hardware prices, attributed to their import from the Far East (par. 1.2.5 of the Review).

<sup>920</sup> Nicolaides, Ph., Polmans, R., *ibid.*, 27. When accounting obligations were imposed on BT in the frame of the former regulatory framework, it was shown that half of BT's costs were whether joint or common (refer to Ryan, M., *BT's Separate Accounts*, [1996] 4 CTLR, 147).

proportion of common costs of a multi-service network which increase the complexity of cost allocation. A higher percentage of common costs to be distributed between regulated and unregulated products increases the risk of anti-competitive cross-subsidisation<sup>921</sup>.

The fixed costs of telecom services result primarily from providing customer access (i.e. connection) to the networks. Variable costs depend on the volume of traffic on the network. These costs include expenditures to operate switches and carry signals, as well as a small portion of billing and collection expenses.

The difference in the level of expenditure involved in both fixed and sunk costs and in variable costs incurred mainly by network operators is noticeable. The telecom sector is comparatively capital intensive as far as networks are concerned, and particularly the access network, which is estimated to cover between one third and one half the investment costs. This is despite the fact that investment goals, such as electronic equipment, cables and wires, whose costs plays a diminishing role compared with the cost of the work needed for their installation, have become cheaper over the past years<sup>922</sup>.

Hence, one of the major problems in the economics of the telecom industry is the allocation of fixed costs to the user (end-user or other operator) for providing access to the network. Marginal cost pricing retains some desirable properties, but in a dynamic context, it has been criticised for failing to remunerate the firm's fixed costs for several reasons. First, the marginal cost is not easy to determine because of the multi-product nature of the industry. In such multi-product industries, it may not be always possible to attribute precise costs to specific products, because the main reason of existence of multi-product firms is precisely to achieve cost-savings, cost-sharing etc.<sup>923</sup>. It is also noted that Next Generation Networks entail changes in cost structure towards a higher

---

<sup>921</sup> BEREC Common Statement on Next Generation Networks Future Charging Mechanisms/ Long Term Termination Issues, BoR(10) 24 Rev 1, 26.

<sup>922</sup> Falch, M., Cost and Demand Characteristics of Telecom Networks in Melody, M. (ed.), *Telecom Reform: Principles, Policies and Regulatory Practices*, DTU, Lyngby, 1997, 108-112. In its 2005 Communications Review, Ofcom also underlined the decrease in hardware prices, attributed to their import from the Far East (par. 1.2.5 of the Review).

<sup>923</sup> Nicolaides, Ph., Polmans, R., *ibid.*, 27. When accounting obligations were imposed on BT in the frame of the former regulatory framework, it was shown that half of BT's costs were whether joint or common (refer to Ryan, M., *BT's Separate Accounts*, [1996] 4 CTLR, 147).

proportion of common costs of a multi-service network which increase the complexity of cost allocation. A higher percentage of common costs to be distributed between regulated and unregulated products increases the risk of anti-competitive cross-subsidisation<sup>924</sup>. The practical result is that the transition to NGN networks, the technological convergence of fixed and mobile networks and the growth of data services, all cause the costs of voice per minute to fall and the decrease of the absolute difference in cost per minute between fixed and mobile<sup>925</sup>.

As an alternative to pure marginal pricing in telecoms, incremental pricing provides a measure of the costs per unit of producing a larger increase in service output<sup>926</sup>. The practical difference between incremental pricing and marginal cost pricing lies in the time period that is taken into account for the calculation of cost. Marginal cost pricing is more static in the sense that it calculates historic investment cost, whereas incremental pricing is more dynamic, i.e. it is a forward – looking assessment of value. This feature makes incremental pricing more complicated than marginal pricing, as the measurement of incremental cost depends crucially upon the time horizon used. Shorter time frames increase average costs, because of the short period of allocation of sunk investments.

Second, for networks which normally enjoy significant economies of scale the marginal cost would lay below average cost, hence it would not lead to full cost recovery. And, third, incumbents need to make out some profit so as to be encouraged to invest in upgrading the network<sup>927</sup>.

#### **6.4.2. Cost-orientation principles**

The liberalisation of the telecommunications market which required the development of wholesale products, have lead economists in turning to costs as a tool for price regulation.

---

<sup>924</sup> BEREC Common Statement on Next Generation Networks Future Charging Mechanisms/ Long Term Termination Issues, BoR(10) 24 Rev 1, 26.

<sup>925</sup> *Ibid.*, 48.

<sup>926</sup> Correa, L., *ibid.*, 53.

<sup>927</sup> Nicolaidis, Ph., Polmans, R., *ibid.*

Pricing on the basis of cost is mainly done with the use of one of the following methods:

- 1) Cost – plus, which calculates tariffs on the basis of historic costs of the operator, i.e. the costs the undertakings have faced in order to build and maintain infrastructure.
- 2) Cost – orientation, which calculates the provision of services at tariffs based on current costs, i.e. the value that assets have at the time the evaluation is made. This does not imply that tariffs must be equal to current costs, but tariffs are not allowed to include excessive prices<sup>928</sup>. Cost – orientation has been frequently discussed as the optimal policy of pricing telecommunication services especially interconnection and/or access fees<sup>929</sup>.

The European Commission has endorsed the principle of cost-orientation in the Directives of the 2002 framework, as well as in their revisions of 2009. This is shown in the first paragraph of Article 13 of the Access Directive, where cost orientation of prices (and only cost orientation) is specifically indicated as falling within the authority of the NRAs in relation to pricing obligations. Cost-priced methods are considered more favourable to new entrants and, thus, more likely to stimulate competition<sup>930</sup>. The Commission takes the view that cost-orientation can provide full justification in markets where competition is not sufficiently strong to prevent excessive pricing<sup>931</sup>.

As pointed out by Nicolaides and Polmans<sup>932</sup>,

“cost orientation is a principle that at first glance appears to be so reasonable that it cannot be faulted. It aims to force dominant firms to charge prices that reflect their current (not historic) costs and to prevent them from earning super-normal profits. However, this principle suffers from three significant weaknesses”.

---

<sup>928</sup> Sometimes the cost-plus and the cost-orientation method are considered as one and the same method, which may be applied on the basis of historic or of current costs, e.g. refer to House of Commons, Trade and Industry Committee, UK Broadband Market, 2<sup>nd</sup> report of session 2003-2004, [http://www.broadbanduk.org/news/news\\_pdfs/TISC%20Report%20Feb%2004.pdf](http://www.broadbanduk.org/news/news_pdfs/TISC%20Report%20Feb%2004.pdf).

<sup>929</sup> For example, Lapuerta, C., Tye, W., Lapuerta, C., Tye, W., *Promoting effective competitive through interconnection policy*, [1999] 23 Telecommunications Policy, 139.

<sup>930</sup> Geradin, D., Kerf, M., *ibid.*, 311.

<sup>931</sup> Recital 20 of the Access Directive. The Commission Recommendation on interconnection in a liberalised telecommunications market (Part 1 – Interconnection Pricing), [1998] OJ L73/42 clarifies the use of models based on LRIC for the purposes of interconnection price regulation.

<sup>932</sup> Nicolaides, Ph., Polmans, R., *ibid.*, 38.

These are:

- a) The arbitrary nature of any method of full-cost allocation in any multiproduct firm; in telecoms, additional regard should be taken to the fact that many of the dominant operators in the EU have been operated as government departments under public budget rules. Appropriate cost allocation is therefore currently extremely difficult, if not impossible<sup>933</sup>.
- b) The inflexibility caused by the obligation on the operator to charge all relevant cost items, irrespective of whether they are recoverable, sunk, variable or common. As a consequence of such inflexibility, incumbents may try to exaggerate their costs or be prevented from lowering their costs when they can, as they deem fit from time to time. And last but not least,
- c) Cost-orientation imposes a heavy information burden on regulators.

And, Nicolaides and Polmans continue:

“[C]ost orientation has been adopted as the pricing tenet of the EC telecoms policy because there was concern about the potential for abuse of market power by incumbent operators (most of which were legal monopolies) and because costs and cost structure were hazy under the old regime of state monopolies. Perhaps, at the beginning of any deregulation and liberalisation, it is inevitable that rules must be cost based in order to introduce transparency and some kind of uniformity of rules across Member States so as to encourage greater cross-border market entry. However, as competition intensifies and as costs become more visible, it is probably more efficient to shift to price based rules and relax the constraints imposed on incumbent operators by the requirement for cost orientation”<sup>934</sup>.

In the same line of thinking, Cave and Crowther consider that cost-oriented pricing for interconnection or access to customers should only be considered when dealing with

---

<sup>933</sup> Haag, M., Klotz, R., *Commission Practice concerning Excessive Pricing in Telecommunications*, [1998] 2 Competition Policy Newsletter, 36.

<sup>934</sup> Nicolaides, Ph., Polmans, R., *ibid.*, 39.

an operator with SMP which is both persistent and incapable of being dealt with by other remedies, including structural remedies<sup>935</sup>.

Wholesale or access pricing is a difficult exercise, because in vertically integrated companies it is difficult to isolate the costs of providing retail services and pure access costs, notably the fixed costs of the network, which may also contain the overall fixed or common costs of the firm as a whole<sup>936</sup>. Cost-based pricing rules are commonly determined with the use of the FDC and LRIC models.

The Fully Distributed Cost (FDC) pricing is one of the oldest pricing models for the calculation of marginal cost and requires that each output generate enough revenue to cover its attributed and allocated costs<sup>937</sup>. The joint and common costs for which no causal relationship can be found are allocated either in proportion or arbitrarily in full to each service. The FDC method was supported by the European Commission in its Guidelines on the application of EEC Competition rules in the Telecommunications sector, for the detection of cross-subsidisation<sup>938</sup>. The Commission also recommended FDC as a regulatory norm under the former regulatory framework<sup>939</sup>. FDC is a relatively easy to implement cost model, but has been criticised, among other, for the arbitrariness entailed in the allocation of joint and common costs and for inefficient allocation of resources based on average rather than incremental costs<sup>940</sup>.

The concept of long-run incremental cost (LRIC)

“should be used to indicate the addition to total cost over a certain range of output, especially when output can expand in non-divisible chunks”<sup>941</sup>.

---

<sup>935</sup> Cave, M., Crowther, P., *Pre-emptive Competition Policy meets Regulatory Anti-trust*, [2005] ECLR., 485.

<sup>936</sup> *Ibid.*, 29-30.

<sup>937</sup> The origins of FDC are found in the theory of economics and Ramsey pricing, which marks-up services where demand is not responsive to price, i.e. the mark-up varies the price to incremental cost ratio in inverse proportion to the elasticity of demand. In practice Ramsey pricing has not been used, because it implies a very detailed knowledge of each service demand function and would also lead to unfair income distribution, Correa, L., *ibid.*

<sup>938</sup> [1991] OJ C233/2, par. 106-108.

<sup>939</sup> E.g. in the leased lines and voice telephony Directives, 92/44/EEC and 95/62/EC respectively.

<sup>940</sup> Confraria, J., Noronha, J., Vala, R., Amante, A., *On the use of LRIC models in price regulation*, at <http://userpage.fu.berlin.de/~jmueller/its/conf/dub01/papers/confraria.pdf>, 4-10.

<sup>941</sup> Nicolaidis, Ph., Polmans, R., *ibid.*, 27.

The usual type of LRIC applied in telecom networks is the Long Run Average Incremental Cost pricing (LRAIC) which measures the difference in costs between producing a service and not producing it<sup>942</sup>. LRIC is the usual practice set by regulators for access pricing<sup>943</sup>. It is said to take the form of the addition of average variable cost of providing network facilities, incorporating a certain amount of profit, and of the appropriate share of fixed costs associated with the network and which are to be borne by the user<sup>944</sup>.

Both FDC and the LRAIC may be calculated on the basis of historic or current costs. The key difference between LRAIC and FDC lies in the treatment of common costs<sup>945</sup>. On the basis of current costs, FDC is transformed into the so-called CCA (Current Cost Allocation) model and LRAIC into the so-called FL-LRAIC. Both models may be adjusted with the use of various mark-ups to minimise –to any possible extent- at least some of the inefficiencies that are inherent in such models<sup>946</sup>. In its Communication on Interconnection Pricing<sup>947</sup>, the Commission recommended the use of FLLRAIC for interconnection pricing, plus a share of joint costs.

LRIC (but also FDC) can be calculated upwards or downwards. The first, known as ‘top-down’ cost modelling starts from the operator’s management accounts of fully allocated costs. The first step involves re-valuing the assets on the basis of their replacement costs. The non-incremental costs such as non-attributive ‘common costs’ are then removed from the accounts and the resulting costs are used to calculate the

---

<sup>942</sup> Confraria, J., Noronha, J., Vala, R., Amante, A., *ibid.*, 16.

<sup>943</sup> BEREC (*ibid.*, 51-52) recommends the strict application of cost orientation in the current Calling Party Pay (CPP) environment in the short/medium term for mobile and fixed networks claiming that bringing down mobile termination rates to efficient cost levels is a major step towards Bill and Keep (BaK).

<sup>944</sup> Nicolaides, Ph., Polmans, R., *ibid.*, 29-30.

<sup>945</sup> FDC attributes to the service under scrutiny only the costs directly determined or caused by that service. In its *Communication on Interconnection Pricing in a Liberalised Telecommunications Market*, [1998] OJ C-84/1, the Commission established that the accounting systems used by most of the ex-monopolists operators, were based on fully distributed historic costs, which were insufficient to support cost-orientation obligations. It also directed the development of new accounting systems and the setting of deadlines for their implementation, where the common costs should be attributed to the fullest extent possible, taking into account the relevant direct and indirect cost drivers.

<sup>946</sup> There are also other financial models that have been used for the pricing of electronic communication services, like the Discounted Cash Flow (DCF) approach that looks at whether the profitability over a product life is sufficient to remunerate the capital invested given the underlying risk, Crocioni, A., *ibid.*, 567. In Freeserve, Oftel had concluded that the DCF approach was appropriate for ‘immature’ services, like consumer broadband access (par. 6.149 of the decision).

<sup>947</sup> European Commission, *Communication on Interconnection Pricing in a Liberalised Telecommunications Market*, [1998] OJ C/84.

incremental costs of a service on a per unit basis. The second approach is known as ‘bottom-up’ cost modelling and it involves the construction of an engineering/economic model of an optimal telecommunications network. By changing certain demand parameters for individual services, it is then possible to calculate the incremental costs of that service. The bottom-up model in designing an optimal telecommunications network rather than using the actual network in place is argued to remove the margin of inefficiency implicit in most incumbent’s network, thereby allowing only efficient costs to be recovered through the interconnect charges<sup>948</sup>.

In the Access Notice, the European Commission has placed particular consideration on the time frame to be taken into account for the necessary cost analysis, which should be neither a very short nor a very long run<sup>949</sup>. The Commission argued that a test different from the simple variable cost standard is required in industries such as telecoms, because the existence of high fixed costs creates excessive room for incumbent firm pricing responses. Since its Recommendation on interconnection pricing, the Commission suggested the use of an FL-LRAIC cost standard for interconnection pricing<sup>950</sup>. The rationale behind the suggestion for an LRIC test is that such pricing method includes an appropriate amount to remunerate capital costs of investing in the network, thus amounting to a requirement to cover something akin to the “average total costs” of manufacture<sup>951</sup>. In the Termination Rates Recommendation<sup>952</sup>, the Commission imposed the application of the BU-LRAIC+ model and has strictly requested compliance with such model in the market notifications concerning termination markets<sup>953</sup>.

In its 2<sup>nd</sup> Recommendation on NGA, the Commission provides the adoption of a BU LRIC + costing methodology that estimates the current cost that a hypothetical efficient operator would incur to build a modern efficient network, which is an NGA network, without prejudice to whether an NGA network in the relevant geographic

---

<sup>948</sup> Correa, L., *ibid.*, 53.

<sup>949</sup> Par. 114 of the Access Notice.

<sup>950</sup> Commission Recommendation of 8 January 1998 on interconnection in a liberalised telecommunications market (Part 1 – Interconnection Pricing), [1998] OJ L73/42, par. 3.

<sup>951</sup> Ridyard, D., Exclusionary Pricing and Price Discrimination Abuses under Article 82 – An economic Analysis, [2002] ECLR, 301.

<sup>952</sup> Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, [2009] L124/67, par. 2.

<sup>953</sup> For example, Cases DE/2013/1460, EE/2012/1352, LV/2012/1356.



market is subject to an obligation of regulated wholesale access pricing, pursuant to the provisions of the 1<sup>st</sup> Recommendation on NGA<sup>954</sup>.

As a condition precedent to the application of cost-orientation principles, article 13 par. 4 of the Access Directive provides that a description of the cost-accounting system “showing at least the main categories under which costs are grouped and the rules used for the allocation of costs” should be made publicly available, where its implementation “is mandated in order to support price controls”. Without a proper cost attribution model, the FDC and LRIC standards make no sense. In a study completed by Anderson Business Consulting in 2002 on behalf of the Commission, it was stated that the failure by most of the then Member-States to identify transfer charges internal to the SMP operator, made detection of discrimination impossible<sup>955</sup>. The Framework Directive, the Universal Service Directive and the Access Directive have all recognised the significance of the application of proper accounting systems for regulatory controls<sup>956</sup>.

The cost attribution model (cost accounting system) should determine how costs are to be allocated between the various services, including wholesale and retail and also determine how costs are allocated between product markets where the undertaking has SMP and “non-SMP products”. In the words of Andrew Tarrant<sup>957</sup>,

“the boundaries of the allocation model must migrate so that they serve as a tool for policing the boundary between the SMP area and the non-SMP areas”.

The current regulatory framework does not impose the use of a particular cost accounting system and allows NRAs to impose transparency requirements with respect

---

<sup>954</sup> Commission Recommendation 2013/466/EU of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment [2013] OJ L251/13, par. 31.

<sup>955</sup> Andersen Business Consulting, *Study on the implementation of cost accounting methodologies and accounting separation by telecommunications operators with significant market power*, July 2002, 29.

<sup>956</sup> Article 17 par. 4 of the Universal Service Directive, Annex VII of the Framework Directive, Article 13 par. 4 of the Access Directive.

<sup>957</sup> Tarrant, A., *ibid.*, 279.

to the applied cost-accounting systems but refrains from setting explicit obligations in relation to the structure of the attribution model<sup>958</sup>.

Without prejudice to the limited knowledge of economics, the present research has not identified specific references to the need to treat oligopolies different from monopolies in case NRAs hold that pricing measures are warranted. However, from the combination of the following

- a) that in oligopolistic markets concerns are more likely to arise as a result of excessive rather than predatory rates or margin squeezes;
- b) that the increased transparency that may be caused by the publication of a detailed cost attribution model may increase transparency, which is a factor enhancing rather than combatting collusion and
- c) that there are voices, like the abovementioned Nicolaides and Polman, considering more efficient the shift to price-based rules if costs become more visible (which may be the case in transparent oligopolies),

one may validly consider that the application of price-based rules to oligopolistic electronic communications markets is worth exploring<sup>959</sup>.

## 6.5. Conclusions

This chapter has completed the review of the applicable SMP framework in electronic communications with the examination of pricing measures applied in the context of

---

<sup>958</sup> Article 13 par. 4 of the Access Directive requires an annual statement of compliance to accompany cost-accounting obligations. The audit may be performed by the NRA, provided that it has the necessary qualified staff, or by an independent auditor (recital 21 of the Framework Directive).

<sup>959</sup> The most usual price-base rule is retail-minus that has been applied for the regulation of wholesale access prices and calculates the price charged to the competitor by reference to the retail price of the standard service and deducting therefrom the avoided costs for the production of the part of the service that is not being ordered by the competitor. The retail minus approach is a simplified form of the “efficient – component pricing” (ECP) or “parity principle”, compensating the operator for the costs of access provision, namely the foregone income from the downstream service minus the direct cost saved by not providing own service. The retail minus adds to the benefit of the operator opportunity cost (the cost of capital) is said to compensate the incumbent for lost opportunity, because it includes part of the incumbent’s foregone profit Caune, R., *Downstream Access in the UK Postal Market: Postcomm’s Proposal*, [2003] Util. Law Rev., 47. Geradin, D., Kerf, M., *ibid.*, 313. The arguments in favour of such approach are that the ECP rule offers a strong incentive to network operators not to oppose the entry of efficient downstream service providers; that predatory behaviour by the incumbent is avoided, because if the rates to the final user are lowered, then access rates should be reduced also. In addition, the ECP rule is favoured as easier to apply, because information on retail prices is easier to obtain than its breakdown into access rates. Finally, it is argued that the ECP rule does not operate to the detriment of competitors, because the latter will contribute to a more efficient allocation of resources if they are at least as cost-efficient as the incumbent, or even more efficient than the incumbent, Nicolaides, Ph., Polmans, R., *ibid.*, 30-31.

Article 13 par. 1 of the Access Directive. The relevance of Article 13 of the Access Directive for the regulation of collective dominance lays mainly in the event of detection of excessive prices, since it is unlikely that margin squeezes or predation occur in oligopolistic markets. Suggesting the optimum method of calculation of the regulated rate is out of the scope and potential of this work; however, given the lack of specific research on the subject, one may validly consider that the application of price-based rules to oligopolistic electronic communications markets is worth exploring.

## Chapter 7: Conclusions of the thesis

The present work has examined the thesis that, under the SMP framework for electronic communications, joint dominance is considered a very rare occasion that may arise in symmetrical duopolies; there are strong doubts on whether the existing framework is capable of addressing more complex issues associated with oligopolies in electronic communication markets.

The starting point of the current research was the remark that there is an increasing number of telecommunications markets with oligopoly characteristics. Wholesale network markets in electronic communications may exhibit oligopoly characteristics and there may be concern that these markets are conducive to tacit collusion. However:

**A.** The focus of *ex ante* SMP regulation in electronic communications has been on the monopolies of the former *incumbents* and builds on traditional single dominance principles, that may be difficult to adapt to the more complex assessment of oligopolistic behavior. The decision to regulate joint dominance in electronic communications *ex ante*, through the application of the dominance test, rests on the paradox that there is not a single Article 102 case precedent, where collective dominance was found to exist. The analysis of section 1.1.2 has shown that the concept of collective dominance was developed mainly in the context of merger cases, which suggests a lower evidence threshold due to *ex ante* speculation as opposed to the *ex post* proof, which seems more robust than *ex ante* speculation. The application of the stronger dominance test of Article 102 may not tally with the relaxation of the evidentiary burden after the Impala judgment.

The analysis has demonstrated that, despite the intent of the Commission to regulate oligopolistic market structures next to monopoly situations, which is expressed in the definition of SMP in electronic communications of Article 14 par. 2 of the Framework Directive, the Commission's thinking has been too much dominated by the concept of single dominance, which is found at the core of *ex ante* regulation in electronic communications markets. The history of telecommunications regulation has shown that, as a result of the former monopolistic nature of the sector, the focus of EU

regulators has always been on the regulation of the former incumbent. Each of the three steps of SMP regulation (market definition, assessment of market power and choice of remedies) indicates that the regulation of oligopolistic markets is placed at the lower end of the Commission's priorities, as opposed to regulation of market power exercised by incumbents.

Given the inevitable complexities inherent in the assessment of joint dominance coupled with the need to review factors that may lead to conflicting credible conclusions, i.e. they may support credibly either the existence or the absence of collective dominance on the same market, and the high level of proof required for the establishment of joint dominance cases, creates doubts on whether there may be findings by NRAs on collective dominance in the long run under the SMP framework for electronic communications. The review of market notifications made by NRAs under Article 7 of the Framework Directive involving collective dominance shows a general trend for pleas on the absence of one condition discrediting in their entirety tacit collusion theories of harm.

In a dynamic and forward-looking market analysis as in the case of the analysis requested by the Commission in the Guidelines, it is doubted whether any economic analysis would be able to provide the degree of certainty requested under Article 102. Despite original 'enthusiasm' in the very first years of application of the framework on the concept of collective dominance, the number of cases that have examined prospective issues of collective dominance remains extremely low if compared with the total number of notifications in the period 2003-2013 (47 cases on a total 1300+ notifications) and is practically non-existent since 2008. What is 'bizarre' is not that there are no markets in electronic communications with established collective dominance today, but that –with the exception of assessments made by the Maltese NRA in the former duopolistic markets of mobile access and wholesale broadband access- NRAs in the 28 member-States do not examine oligopolistic markets at all. The impression gained from the review of NRA notifications is that joint dominance is considered a very rare occasion that may arise in symmetrical duopolies, a position that may be possibly in compliance with the approach to light-handed regulation and avoidance of decisional abuse.

**B.** International wholesale roaming has been examined as a case study of the failure of the existing framework to address the complex interrelationships between collectively dominant players. The case study proves that once an oligopolistic market is identified, the burden of proving that it breaches Article 102 is very onerous. Despite *prima facie* concerns of collective dominance, the subsequent analysis of NRAs resembles to a search for market characteristics that can negate this preliminary conclusion by proving the absence of one condition.

The NRAs that conducted their market research on the international roaming market acknowledged the existence of excessive international roaming charges compared with national calls, as well as the existence of factors inducing the market to a co-ordinated outcome, but they placed emphasis on the existence of the pan-European alliances for the provision of roaming services, which they considered inhibiting transparency and retaliation. However, the prospect of retaliatory mechanisms at retail level through ‘price wars’ consisting in the deviation from the principles of the common commercial strategy, was not examined, albeit the ERG had found low elasticity of demand in the direction of international roaming traffic towards alliance or group partners and the findings of the *Impala* judgments with respect to transparency and retaliation have not been taken into account. It is reasonable to assume that NRAs have refrained from regulating wholesale international roaming tariffs at a national level, in order to avoid limiting the profit margins of national operators set in favor of international roaming customers and foreign mobile network operators.

It is noted further that the process for the identification of trans-border roaming markets susceptible to ex ante regulation was not adhered to, despite the acknowledged cross-border nature of the services and the possibility of collusion between the biggest international alliances operating in the European roaming market. It is supportable to assume that, in recognizing the failure of SMP regulation to address collective dominance in wholesale roaming markets, the Commission decided to depart from the SMP framework in electronic communications and passed the Roaming Regulations. According to the Commission, the volume of the roaming market has increased and rates have fallen, whereas concerns on adverse effects on national mobile rates did not materialize.

If the Commission decides to place more weight to the prospective regulation of oligopolistic markets in electronic communications (and this is primarily a policy decision), Annex II of the Framework Directive and/or the Guidelines should be revised. It must be made clear that NRAs should take into account the following factors when analyzing markets with concerns of collective dominance:

- i) market concentration and particularly the number of players in the market as opposed to market shares, although the existence of symmetries between market players in terms of shares and of cost structures must be taken into account;
- ii) transparency, which may be presumed in the absence of credible explanation for the justification of alignment of prices in the frame of the *Impala* judgement;
- iii) the existence of retaliation mechanisms, which may be also determined indirectly after the *Impala* judgement;
- iv) the exercise of competitive constraints by the competitive fringe and potential competitors;
- v) the countervailing power of buyers.

The NRAs should collect market data suggestive of tacit collusion and, on this basis build a theory of harm. They should then verify the foregoing factors and establish if they comply with the theory of harm.

**C.** The Commission has defined narrow product markets and through such narrow pre-definition, it limits considerably the assessment of prospective collective dominance issues. These policy decisions place the regulation of oligopolistic markets at the lower end of regulatory priorities, as opposed to regulation of market power exercised by monopolists. It is noted that in the first ten years of application of the SMP framework, none of the notifications on markets different from the list of the Recommendation involved a market with oligopolistic characteristic or concerns of collective dominance.

Through the definition of a separate market for the termination of calls on individual networks, the Commission has pre-established single dominance on the markets for call termination on both mobile and fixed networks. One possible explanation is that

the Commission, in recognising the complexities involved in the assessment of factors capable of establishing collective dominance, did not want to leave lea-way to NRAs to refuse the regulation of termination charges unregulated. It may also be the case, that the narrow market definition of the termination markets is the result of cellophane fallacy effects, notably of the failure to capture the oligopolistic nature (and interactions) of the relevant market, hence defining network operators as monopolists rather than oligopolists.

The delineation of a separate market for terminating segments of leased lines also points to the designation of the former incumbent as monopolist in the relevant market. The two markets defined for broadband access are the only markets where, theoretically, joint dominance can be established between operators providing broadband through different platforms, particularly as the Commission does not preclude the merging of the two markets into one.

The Commission has excluded mobile services, which is the classic example of oligopolistic structure in telecoms, from the list of regulated markets, with the exception of call termination which applies on calls made on both fixed and mobile platforms, despite indications that the market may not be sufficiently competitive in some member-states. This reflects the Commission's political decision to leave mobile services out of regulation.

Finally, the lack of definition of any transnational market provides further demonstration of the fact that, through SMP regulation, the Commission's focus is still on incumbents' operation at national level. For the purposes of the review of oligopoly regulation in the telecommunications sector, such decision would be of particular interest, given the limited number of undertakings that operate trans-nationally. It is expected that, in this process and in view of the increasingly global character of network markets, the Commission examines the structure of existing European networks, whether applied for voice, Internet or other applications, to identify potential 'top-level' or key networks for the connectivity of trans-national network markets.

If the Commission decides to place more weight on the prospective regulation of oligopolistic markets in the future, the European framework on SMP regulation should



be revised in order to encompass wider market definitions. Wider market definitions will allow the assessment of prospective joint SMP held by operators present in the market. In that respect, the Commission should consider the definition of wider markets for the origination and termination of calls, encompassing multiple networks and possibly multiple platforms. Alternatively, the Commission may opt for the definition of a market for the termination of all off-net calls with a possible further segmentation by reference to the platform where the call is terminated (mobile, fixed etc.). Further, there should be one market for broadband access, encompassing all types of access.

**D.** In the context of remedies, the existing framework does not differentiate between single and collective SMP and does not give any guidance on the application of the separate categories of remedies in oligopolistic markets.

Yet, transparency, non-discrimination and accounting separation obligations, which are essentially one and the same measure, may create additional distortions in oligopolistic environments, if they are not applied with caution. Transparency obligations create the risk of causing the opposite result of their intended purpose, since they are likely to further collusion rather than prevent it by allowing the operators to observe each other's charges and making cooperation easier; hence, they should focus on issues that may bring factors capable of preventing collusion into light.

The indispensability of transparency for the application of non-discrimination obligations also impairs the efficiency of the latter on oligopolistic markets. In addition, non discrimination obligations enhance stability and similarity in cost structures, which is considered a further factor inductive to tacit collusion. Non-discrimination obligations should be treated with caution in the context of regulation of oligopolistic markets also because excuses supporting a transaction-specific efficiency defence under general competition law principles, are easier to find in a complex oligopolistic environment with no monopoly equilibrium. The collusive access price may already be non discriminatory, whereas discriminatory pricing or selective price-cutting by one of the undertakings may mean that price competition is in fact operating between the oligopolists.

The direct association of accounting separation with the obligations on transparency and non-discrimination suggests that problems similar to that identified in relation to transparency and non-discrimination also apply in this area regarding co-ordinated effects and the possible promotion or facilitation of tacit collusion through the imposition of obligations on accounting separation; the exchange of business information may be facilitated and, consequently, the sustainability of a common position towards competitors and consumers. However, the downsides of the measure may be mitigated if the information is not disclosed by NRAs to third parties.

Finally, functional separation is not considered appropriate for the regulation of oligopolistic network markets. On top of the generally known risks entailed in structural separation (risk of welfare losses and particularly of the concern that the remaining set of functions will not operate as incentive to innovate), the efficiency of structural separation for the purposes of regulating oligopolistic markets is disputed further, because of the increased transparency created through the separation of operations. Also, economists have challenged the effectiveness of structural remedies in oligopolistic environments on the grounds that inappropriate divestments may actually facilitate collusion by restructuring an industry in a more symmetric way.

Access obligations are inevitable for the regulation of SMP in electronic communications. However, they enhance co-operation between the undertakings involved and, as such, facilitate the exchange of information between competitors and, thus, collusion, which may eventually reduce the efficiency of their several application in oligopolistic environments. Economic analysis has shown that entry through access obligations, if they are not complemented by some form of price regulation, may also lead to higher prices, particularly in markets with more than two players or where there is already collusion between the oligopolistic players.

Also, unlike single SMP, there should be no absolute approach against intervention at retail level in oligopolistic situations, because measures taken at retail may be capable of remedying anti-competitive practices at wholesale level, in oligopolies where the same players are active both at wholesale and retail level and the effects of collusion at wholesale are passed on to retail customers directly. It is, therefore, suggested that the revised framework allows the taking of measures at retail level directly, since the

absolute position taken in SMP regulation against intervention at retail level is incorrect for oligopolistic markets.

The foregoing remarks should be made clear in a future revision of the Access Directive or of the Guidelines.

As an alternative to access obligations, it is worthy of exploring with further economic analysis the option of imposing penalties on collectively dominant undertakings and applying the receivables of such penalties for the financing of network roll-out by new entrants. On condition that such scheme could obtain the required prior consent under Article 107(3) TFEU, the suggested option may exercise competitive pressure on the oligopolists, since there is general consensus that the most credible pressure in anti-competitive oligopolies may be exercised by new entry.

Finally, the relevance of Article 13 of the Access Directive for the regulation of collective dominance lays mainly in the event of detection of excessive prices, since it is unlikely that margin squeezes or predation occur in oligopolistic markets. Suggesting the optimum method of calculation of the regulated rate is out of the scope and potential of this work; however, given the lack of specific research on the subject, one may validly consider that the application of price-based rules to oligopolistic electronic communications markets is worth exploring.

In closing, it must be emphasised that the effectiveness and correct application of any SMP framework depends on administrative skills, notably the training and skills of the staff involved. Market assessment and the choice of applicable remedies for the regulation of market power particularly in oligopolistic markets is not a mechanical or abstract process but requires an analysis of any available evidence of market behaviour and an overall understanding of the mechanics of the electronic communications sector. Accurate market identification, the assessment of market power and application of the correct pricing measures which are all essential for the proper regulation of oligopolistic electronic communications markets depend to a great extent on the proper gathering of all necessary information, findings and studies commissioned or relied upon by NRAs in exercising their regulatory tasks and on the education, skills and competence of the staff employed by the NRAs.

The thesis has not examined the practical query of adequacy or competence of personnel employed by NRAs for the application of the SMP framework in so far as the implementation of the suggestions for the revision of the framework to allow the more efficient regulation of telecommunications markets. It is acknowledged, though, that the positive reply to this query is a condition precedent to the success of any revision of the framework and additional input will be required on the necessary measures to be taken in this direction.

## Bibliography

- Akman, P., Garrod, L., *When are excessive prices unfair?, CCP Working Paper 10-4, available at <http://competitionpolicy.ac.uk/documents/107435/107587/1.150484!ccp10-04.pdf>*
- Alese, F., *The Economic Theory of Non-Collusive Oligopoly and the Concert of Concerted Practice Under Article 81, [1999] ECLR, 379-383.*
- Alfter, A., Jount, J., *Economic Analysis of Cartels – Theory and Practice, [2005] ECLR, 548.*
- Andersen Business Consulting, *Study on the implementation of cost accounting methodologies and accounting separation by telecommunications operators with significant market power, July 2002.*
- Appeldoorn, J., *He Who Spareth his Rod, Hateth his Son? Microsoft, Super-dominance and Article 82 EC, [2005] ECLR, 653-659.*
- Areda, P., Turner, D., *Predatory Pricing and Related Practices under Section 2 of the Sherman Act, [1975] 88 Harv.L.Rev., 697-733.*
- Arowolo, O., *Application of the Concept of Barriers to Entry under Article 82 of the EC Treaty: is there a Case for Review?, [2005] ECLR, 247-257.*
- Aumann, R.J., *Game Theory in The New Palgrave Dictionary of Economics Online, 2008, 2<sup>nd</sup> edition, Durlauf, S., Blume, L. (eds), [www.dictionarypeconomics.com](http://www.dictionarypeconomics.com)*
- Azevedo, J., Walker, M., *Dominance: Meaning and Measurement [2002] ECLR, 363-367.*
- Azevedo, J., Walker, *Market Dominance: Measurement Problems and*

- M., *Mistakes*, [2003] ECLR 641-643.
- Bain, S., *Economies of Scale, Concentration and the Conditions of Entry in Twenty Manufacturing Industries*, [1954] 44 American Economic Review, 15-39.
- Baker, S., Coscelli, A., *The Role of Market Shares in Differentiated Product Markets* [1999] ECLR 412-419.
- Bartosch, A., *E.C. Telecommunications Law: The New Draft Directive on the Legal Separation of Networks*, [1998] ECLR, 514-519.
- Baxter, S., Dethmers, F., *Unilateral Effects under the European Regulation: How Big is the Gap?* [2005] ECLR, 380-389.
- Bay, M., Calzado, J., *Tetra Laval II: the Coming of Age of the Judicial Review of Merger Decisions*, [2005] World Competition, 433-453.
- BEREC, Response to the European Commission's questionnaire for the public consultation on the revision of the Recommendation on Relevant Markets, BoR (13) 22.
- BEREC, Common Statement on Next Generation Networks Future Charging Mechanisms/ Long Term Termination Issues, BoR(10) 24 Rev 1.
- BEREC, Report on impact of bundled offers in retail and wholesale market definition, BoR (10) 64.
- Bernheim, D., *Multimarket Contact and Collusive Behavior*, [1990] Whinston, M., Rand Journal of Economics, 1-26.
- Bertrand, J.L.F., *Calcul des Probabilites*, 1888, Paris: Gauthier-Villars.
- Binmore, K., *The Biggest Auction ever: the sale of the British 3G Telecom Licenses*, [2002] The Economic Journal, 112: 74-96
- Klemperer, P.,
- Bishop, S., Walker, M., *Economics of EC Competition law*, Sweet & Maxwell, London, 2006.
- Bittlingmayer, G., *"Open Access:" the ideal and the real*, [2002]26

- Telecommunications Policy, 295-310.
- Black, O., *Collusion and Co-ordination in EC Merger Control*, [2003] ECLR, 408-411.
- Blackman, C., *Convergence between telecommunications and other media*, [1998] Telecommunications Policy, 166-170.
- Boege, U., Mueller, E., *From the Market Dominance Test to the SLC Test: Are There Any Reasons for a Change?*, [2002] ECLR, 495-498.
- Briones, J., *A Balance of the Impact of Economic Analysis on the EU Competition Policy*, [2009] World Competition, 27-39.
- Briones, J., Padilla, A., *The Complex Landscape of Oligopolies under EU Competition Policy: Is Collective Dominance Ripe for Guidelines?* [2001] World Competition 307-318.
- Brito, D., Pereira, P., *Access to Bottleneck Inputs under Oligopoly: a Prisoners' Dilemma?*, [2008] at [http://www.concorrenca.pt/download/WP16\\_Bottleneck\\_Feb\\_2008.pdf](http://www.concorrenca.pt/download/WP16_Bottleneck_Feb_2008.pdf).
- Brittan, L., *The Law and Policy of Merger Control in the EEC*, [1990] ELRev, 351-357.
- Brodey, M., *Telecommunications: Towards a new EU Regulatory Framework for Electronic Communications*, [2000] CTRLR, 180-186.
- BT, *Primary Accounting Documents*, November 2004.
- Camesasca, P., *European Merger Control: Getting the Efficiencies Right*, Intersentia Hart, London, 2000.
- Carlton, D., Perloff, J., *Modern Industrial Organisation*, Pearson, 2005, 4<sup>th</sup> edition.
- Caune, R., *Downstream Access in the UK Postal Market: Postcomm's Proposal*, [2003] Util. Law Rev., 44-48.
- Cave, M., Crowther, P., *Pre-emptive Competition Policy meets Regulatory Anti-trust*, [2005] ECLR, 481-491.

- Cave. M., Stumpf, U., Valetti, T., *A Review of Certain Markets included in the Commission's Recommendation on Relevant Markets subject to ex ante Regulation*, July 2006.
- Christensen, P., Rabassa, V., *The Airtours decision: Is there a new Commission approach to collective dominance?*, [2001] ECLR, 227-237.
- Clemens, B., *The impact of convergence on regulatory policy in Europe*, [1998] Telecommunications Policy, 199-205.
- Colomo Ibanez, P., *The Law on Abuses of Dominance and the System of Judicial Remedies*, LSE Law, Society and Economy Working Papers 13/2013, [http://www.lse.ac.uk/collections/law/wps/WPS2013-13\\_Ibanez.pdf](http://www.lse.ac.uk/collections/law/wps/WPS2013-13_Ibanez.pdf)
- Communications Working Document on Broadband Access, Committee, 21.11.2010, CoCom (10)29.
- Competition Roundtable on market definition, Committee, DAF/COMP/WD(2012)28
- Confraria, J., *On the use of LRIC models in price regulation*, at Noronha, J., Vala, R., <http://userpage.fu.berlin.de/~jmueller/its/conf/dub01/papers/confraria.pdf>.
- Amante, A.,
- Cook, J., Kerse, C.S., *EC Merger Control*, Oxford University Press, 2000.
- Corchon, L., Marcos, F., *Price Regulation in Oligopoly*, University Carlos III of Madrid Working Papers, Economic Series, January 2010.
- Correa, L., *The Economics of Telecommunications Regulation*, in Walden, I. (ed.), *Telecommunications Law*, Sweet & Maxwell, London, 2002.
- Cournot, A., *Researches into the Mathematical Principles of the Theory of Wealth*, 1938 (1897, translation into English by N.T. Bacon).
- Crocioni, A., *Price Squeeze and Imputation Test- Recent Developments*, [2005] ECLR, 558-571.



- Croscioni, P., *The Hypothetical Monopolist Test: What it can and cannot tell you*, [2002] ECLR, 354-362.
- Cullen International, *Study on the Regulation of Broadcasting Issues under the New Regulatory Framework*, prepared for the European Commission, 22.12.2006.
- Davies, O., Coles, H., *Tacit Collusion, Firm Asymmetries and Numbers: Evidence from EC Merger Cases*, February 2010, <http://competitionpolicy.ac.uk/documents/107435/107587/ccp07-7.pdf>.
- Daughety, A., Forsythe, R., *The effects of industry-wide price regulation on Industrial Organisation*, [1987] Journal of Law, Economics & Organisation, vol. 3, No. 2, 397-434.
- De Streel, A., *The new concept of "Significant Market Power" in Electronic Communications: the hybridisation of the sectoral regulation by competition law*, [2003] ECLR, 535-542.
- Defraigne, Ph., *EU New Regulatory Framework – Is it working?*, [2005] ECLR 597-600.
- Dethmers, F., *Collective Dominance under EC Merger Control – After Airtours and the Introduction of Unilateral Effects is there still a Future for Collective Dominance?* [2005] ECLR, 638-649.
- Dethmers, F., Dodoo, N., *The abuse of Hoffmann-La Roche: the meaning of dominance under EC Competition Law*, [2006] ECLR, 537-549.
- DG Competition, *Merger Remedy Study*, October 2005, available at [http://europa.eu.int/comm/competition/mergers/others/remedies\\_study.pdf](http://europa.eu.int/comm/competition/mergers/others/remedies_study.pdf), p. 164f.
- DG Competition, *Discussion Paper on the application of Article 82 of the Treaty to exclusionary abuses*, December 2005.
- Di Mauro, L., *Defining the Retail Markets for Audiovisual Products*, [2003] ECLR, 384-393.
- Dobbs, B., Richards, *Output restriction as a measure of market power*,

- D., [2005] ECLR 572-580.
- Dobson P., Inderst, *Differential Buyer Power and the Waterbed Effect: Do Strong Buyers Benefit or Harm Consumers?*, [2007] ECLR, 393-400.
- Dolmans, M., Graf, *Analysis of Tying under Article 82 EC: the European Commission' s Microsoft Decision in Perspective*, [2004] 2 World Competition, 225-244.
- Th.,
- Dreher, M., Adam, *Abuse of Dominance under Reform – Sound Economics and Established Case Law*, [2007] ECLR 278-282.
- M.,
- Dupuis-Toubol, F., *The French Telecommunications Monopoly: How to Break the Bottleneck of the Local Loop*, [2002] CTRLR, 131-135.
- Durie, R., Romer, J., *The impact of regulation on the mobile marketplace – Past, present and future*, [2002] CTRLR, 91-96.
- Easter, C., Hughes, *Collusion and Co-operation in the Mobile Sector*, [2001] CTRLR, 191-198.
- M.,
- Ecorys, *Final Report commissioned for DG Connect: Future electronic communications markets subject to ex ante regulation*, Rotterdam, 18.09.2013
- Etter, B., *The Assessment of Mergers in the EC under the Concept of Collective Dominance* [2000] Journal of World Competition, 103-139.
- European Regulators Group, *Revised ERG Common Position on the Approach to Appropriate Remedies in the ECNS regulatory framework*, May 2006.
- Evans, D., Padilla, J., *Tying in Platform Software: Reasons for a Rule-of-Polo, M., Reason Standard in European Competition Law*, [2002] 4 World Competition, 509-514.
- Ezrachi, A., *Behavioural Remedies in EC merger control – scope and limitations*, [2006] World Competition, 459-479.
- Falch, M., *Cost and Demand Characteristics of Telecom*

- Networks in Melody, M. (ed.), *Telecom Reform: Principles, Policies and Regulatory Practices*, DTU, Lyngby, 1997.
- Fernandez Alvarez-Labrador, M., *Margin Squeeze in the Telecommunications Sector: An Economic Overview*, [2006] *World Competition*, 247-268.
- Finell, L., *The Article 82 Reform: Increasing the Incentives to Comply?*, [2009] *World Competition*, 283-303.
- Fountoukakos, K., *A New Substantive Test for EU Merger Control*, [2005] *ECLR*, 277-298.
- Ryan, S., *Reducing Rivals Prices: Government-Supported Mavericks as New Solutions for Oligopoly Pricing*, [2001] *7 Stanford Journal of Law, Business and Finance*, 73-102.
- Gal, M., *Telecommunications Broadcasting and the Internet*, 1<sup>st</sup> edition, Sweet & Maxwell, 2000.
- Garzaniti, L., *Recent Developments in the European Commission's Practice in the Communications Sector*, Part 1, [2004] *ECLR*, 149-176.
- Liberatore, F., *Recent Developments in the European Commission's Practice in the Communications Sector*, Part 2, [2004] *ECLR*, 234-240.
- Garzaniti, L., *Recent Developments in the European Commission's Practice in the Communications Sector*, Part 3, [2004] *ECLR*, 286-298.
- Liberatore, F., *Controlling market power in telecommunications*, OUP, 2003.
- Geradin, D., Kerf, M., *Article 82 and Price Discrimination in Patented Pharmaceuticals: the Economics*, [2005] *ECLR* 135-143.
- Glynn, D., *New Zealand's New Mergers Test: A Comparison of Dominance and Substantial Lessening of Competition in the Supermarket Industry*, [2003] *ECLR*, 300-311.

- Goliath, *Access to Bottleneck Inputs under Oligopoly: a prisoner's dilemma?*, Southern Economic Journal, 2010, available at [http://goliath.ecnext.com/coms2/gi\\_0199-12143888/Access-to-bottleneck-inputs-under.html](http://goliath.ecnext.com/coms2/gi_0199-12143888/Access-to-bottleneck-inputs-under.html)
- Grewlich, K., *"Cyberspace": Sector-Specific Regulation and Competition Rules in European Telecommunications* [1999] C.M.L.Rev, 937-969.
- Groebel, A., *Why Germany Does Not Regulate Wireless Carriers – Under which Circumstances should Wireless Carriers be Regulated?*, [2002] CTLR 153-156.
- Gruber, H., *Spectrum limits and competition in mobile markets: the role of license fees*, [2001] Telecommunications Policy, 59-70.
- Grzybowski, L., *Regulation of Mobile Telephony across the European Union: An Empirical Analysis*, Journal of Regulatory Economics, [2005], 28:1, 47-67.
- Haag, M., Klotz, R., *Commission Practice concerning Excessive Pricing in Telecommunications*, [1998] 2 Competition Policy Newsletter, 35-38.
- Haupt, H., *Collective Dominance under Article 82 EC and the EC Merger Control in the light of the Airtours Judgement* [2002] ECLR, 434-444.
- Heimler, A., *Relationship between the Antitrust Authority and Sectoral Regulators: The Italian Experience*, [2000]10 ECLR, 444-447.
- Helm, D., Jenkinson, T., *Introducing Competition into Regulated Industries*, in Helm, D., Jenkinson, T. (eds.), *Competition in Regulated Industries*, OUP, 1998.
- Hildebrand, D., *Using Conjoint Analysis for Market Definition: Application of Modern Market Research Tools to Implement the Hypothetical Monopolist Test*, [2006] World Competition, 315-336.

- Hou, L., *Collective Dominance within the context of EU electronic communications regulation*, [2009] *Competition and Regulation in Network Industries*, vol. 10.
- Hou, L., *The assessment of collective SMP: Lessons learned from the first market review, December 1<sup>st</sup>, 2008*, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1309684](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1309684)
- Hovenkamp, H., *Federal Antitrust Policy: The Law of Competition and its Practice*, 2<sup>nd</sup> edition, West Publishing Co, 1999.
- Howarth, D., *“Windows has Performed an Illegal Operation”: the Court of First Instance’s Judgement in Microsoft v Commission*, [2008] ECLR, 117-134.
- McMahon, K.,
- Hrawick, E., *Clipping the Commission’s Wings: The CFI’s Airtours Ruling*, [2001/2002]4, Util. Law Rev. 94-100.
- Hunt, A., *Dogma and Pragmatism in Telecoms Regulation: The case of Local Loop Unbundling*, [2000] 4 Util. Law Rev., 113-121.
- Huntley, J., *New Directions in US Telecommunications Regulation: The impact of the Telecommunications Act 1996 on “Local” Provision*, [2000]3 International Journal of Law and Information Technology, 310-337.
- Jones, A., Suffrin, B., *EC Competition Law*, 2<sup>nd</sup> edition, 2004.
- Kahn, A., *Comments on exclusionary airline policy*, [1999] 5 Journal of Transport Management, 1-12.
- Kallaugher, J., Sher, B., *Rebates Revisited: Anti-competitive Effects and Exclusionary Abuse under Article 82*, [2004] ECLR, 263-285.
- Kamecke, U., Korber, T., *Technological Neutrality in the EC Regulatory Framework for Electronic Communications: A Good Principle Widely Misunderstood*, [2008] ECLR, 330-337.

- Kerber, W., Vezzoso, S., *EU Competition Policy, Vertical Restraints and Innovation: An Analysis from an Evolutionary Perspective*, [2005] *World Competition*, 507-532.
- Kerf, M., Geradin, D., *Post-liberalisation Challenges in Telecommunications: Balancing Antitrust and Sector-Specific Regulation*, [2000] 2 *Journal of World Competition*, 27-77.
- Kloosterhuis, E., *Joint Dominance and the Interaction between Firms* [2001] *ECLR.*, 79-92.
- Kocmut, M., *Efficiency considerations and Merger Control – Quo Vadis, Commission?* [2006] *ECLR*, 19-27.
- Kokkoris, I., *Assessment of Mergers Inducing Coordinated Effects in the Presence of Explicit Collusion*, [2008] *World Competition*, 499-522.
- Kokkoris, I., *The Development of the Concept of Collective Dominance in the ECMR. From its Inception to its Current Status*, [2007] *World Competition*, 419-448.
- Kokkoris, I., *The Concept of Market Definition and the SSNIP Test in the Merger Appraisal*, [2005] *ECLR* 209-214.
- Kokkoris, I., *The Reform of the European Control Merger Regulation in the Aftermath of the Airtours Case – the Eagerly Expected Debate: SLC v Dominance Test*, [2005] *ECLR*, 37-47.
- Kokkoris, I., Day, L., *Buyer Power in UK Merger Control*, [2009] *ECLR*, 176-188.
- Kon, S., Turnbull, S., *Pricing and the Dominant Firm: Implications of the Competition Commission Appeal Tribunal's Judgement in the Napp Case*, [2003] *ECLR*, 70-86.
- la Cour, L., *Meaningful and Measurable Market Domination*, [2003] *ECLR*, 132-135.
- Mollgaard, H.P., *Two important rejection decisions on excessive pricing in the port sector*, [2004] 3 *Competition Policy Newsletter*, 40-43.
- Lamalle, M., *Two important rejection decisions on excessive pricing in the port sector*, [2004] 3 *Competition Policy Newsletter*, 40-43.
- Lindstrom-Rossi, L., *Two important rejection decisions on excessive pricing in the port sector*, [2004] 3 *Competition Policy Newsletter*, 40-43.
- Teixteir, A., *Two important rejection decisions on excessive pricing in the port sector*, [2004] 3 *Competition Policy Newsletter*, 40-43.

- Lapuerta, C., Tye, W., *Promoting effective competitive through interconnection policy*, [1999] 23 Telecommunications Policy, 129-145.
- Larouche, P., *Competition Law and Regulation in European Telecommunications*, Hart Publishing, London, 2000.
- Larouche, P., *EC Competition Law and the Convergence of the Telecommunications and Broadcasting Sectors*, (1998)22 Telecommunications Policy, 219-242.
- Larson, A., Parsons, S., *“Buidling Block” Cost Methods for Pricing and Unbundling Telecommunications Services: Implications for the Law and Regulatory Policy*, 36 Jurismetrics Journal 59-97 (Fall 1995), 59-97.
- Le, N., *What Does “Capable of Eliminating all Competition” Mean?*, [2005] ECLR 6-10.
- Lehr, W., Hubbard, G., *Economic case for voluntary structural separation*, at <http://itc.mit.edu/itel/docs/2003/struct-separation.pdf>.
- Leveque, F., *Innovation, Leveraging and Essential Facilities: Interoperability Licensing in the EU Microsoft Case*, [2005] World Competition, 71-91.
- Litzell, M., *The Appraisal of Collective Dominance under the Clarified Substantive Test of the New EC Merger Regulation – A Step towards greater global convergence of merger control?*, [2005] 1 ELSA SPEL.
- Maier-Rigaud, F., *Experimental economics and competition policy: Unilateral and Co-ordinated Effects in Competition Games*, [2008] ECLR, 408-417.
- Manoussakis, S., *Liberalisation of the EU Electricity Market: Enough to Power Real Progress?*, [2009] World Competition, 227-247.
- Mc Callum, L., *EC Competition Law and Digital Pay Television*, [1999] 1 Competition Policy Newsletter, 4-16.
- McCartney, C., *Mobile Network Access and Call Origination*, [2004]

- CTLR, 25-26.
- McGregor, L., *The Future for the Control of Oligopolies* [2001] ECLR 434-442.
- Mertikopoulou, V., *DG Competition's Discussion Paper on the Application of Article 82 to Exclusionary Abuses: the Proposed Economic Reform from a Legal Point of View*, [2007] ECLR, 241-251.
- Mezzanotte, F., *Interpreting the Boundaries of Collective Dominance in Article 102 TFEU*, [2010]4 European Business Law Review, 519-537.
- Mezzanotte, F., *Can the Commission use Article 82EC to combat Tacit Collusion?* CCP Working Paper 09-5, February 2009.
- Monti, M., *Article 81 and Public Policy*, [2002]39 CMLR 1057-1099.
- Mosteshar, S., *European Community Telecommunications Regulation*, Graham & Trotman, 1993.
- Moura e Silva, M., *Predatory Pricing under Article 82 and the Recoupment Test: Do not go gentle into that Good Night*, [2009] ECLR, 61-66.
- Mueller, U., *The Rise and Fall of the Essential Facility Doctrine*, [2008] ECLR, 310-329.
- Rodenhausen, A.,
- Muys, S., *New Whines and Old Whineskins: Addressing the Challenge of Regulating IP-based Networks and Services*, [2006] CTLR, 59-66.
- Muysert, P., *Price Discrimination – An Unreliable Indicator of Market Power*, [2004] ECLR, 350-355.
- Naftel, M., *The Natural Death of a Natural Monopoly: Competition in EC Telecommunications after the Telecommunications Terminals Judgement*, [1993]3 ECLR, 105-113.
- Navarro, E., Font, A., *Merger Control in the EU, Law Economics and Practice*, Oxford University Press, 2002.
- Folguera, J., Briones, J.,



- Newton, Ch., *Do Predators Need to be Dominant?* [1999] ECLR, 127-131.
- Nicolaides, Ph., Polmans, R., *Competition in EC Telecommunications: Cross-Subsidisation, Access and Predatory Pricing*, [1999]4 World Competition, 21-43.
- Niels, G., *Collective Dominance: More than just Oligopolistic Interdependence* [2001] ECLR, 168-172.
- Niels, G., Jenkins, H., *Reform of Article 82: Where the Link between Dominance and Effects Breaks Down*, [2005] ECLR, 605-610.
- Nikolinakos, N., *The New Legal Framework for Digital Gateways- the Complementary Nature of Competition Law and Sector-specific Regulation*, [2000]9 ECLR, 411-414.
- Nikolinakos, N., Polykalas, S., Kouvelou, D., *Bitstream Access Policy in the EU Electronic Communications Sector – Application of Ex Ante Regulation and Competition Law*, [2004] CTLR, 27-33.
- Ofcom, *Decision to vary Everything Everywhere's 1800 MHz spectrum licenses to allow use of LTE and Wimax technologies*, 21.08.2012
- Ofcom, *Ofcom, Statement on variation of 900 MHz and 1800 MHz Wireless Telegraphy Act licenses*, 06.1.2011.
- Ofcom, *Consultation document: Application of Spectrum Liberalisation and Trading to the Mobile Sector*, 20.09.2007.
- Ofcom, *Strategic Review of Telecommunications*, 18.11.2004.
- OFT *Assessment of Conduct: Competition Law Guidelines*, April 2004, available at [http://www.ofc.gov.uk/shared\\_ofc/business\\_leaflets/competition\\_law/ofc414a.pdf](http://www.ofc.gov.uk/shared_ofc/business_leaflets/competition_law/ofc414a.pdf)
- OFTEL, *Access Network Facilities: OFTEL Guidelines on proposed condition 83 of BT's License*, July 2000.
- Olesen, H., Sundahl, *The Power Fallacy: Energizing the Cellophane*

- L., *Fallacy*, [2006] ECLR 700-704.
- Papandropoulos, P., *The Merger Remedies Study – In Divestiture we Trust?*, [2006] ECLR, 443-454.
- Tajana, A.,
- Papon, S., *Structural versus Behavioural Remedies in Merger Control: A Case-by-Case Analysis*, [2009] ECLR, 36-48.
- Parker, A., Taylor, P., *The European market dances to the rhythm of big deals*, Financial Times, reproduced in the Greek *Imerissia* on 2-3.12.2006.
- Tucker, S.,
- Pelkmans, J., Renda, *Single eComms Market? No such thing ...*, Bruges A., European Economic Policy Briefings [2011] 22.
- Petit, N. *The ‘Oligopoly Problem’ in EU Competition Law*, in *Research Handbook in European Competition Law*, I. Liannos and D. Geradin eds., Edward Elgar, September 2013, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1999829](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1999829), p. 5
- Petit, N., *Remedies for Coordinated Effects under the European Union Merger Regulation*, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1639906](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1639906)
- Pitt, E., *Telecommunications Regulation: Is it realistic to rely on competition law?* [1999] ECLR, 245-248.
- Richardson, R., *Collective Dominance: The Third Way?* [2001] ECLR, 416-423.
- Gordon, C.,
- Richardson, T., *BT faces life changing three months*, 22 November 2004, [www.register.com](http://www.register.com).
- Ridyard, D., *Exclusionary Pricing and Price Discrimination Abuses under Article 82 – An economic Analysis*, [2002] ECLR., 286-303.
- Ridyard, D., *Essential Facilities and the Obligation to Supply Competitors under UK and EC Competition Law*, [1996] ECLR, 438-452.

- Riley, A., *A Unique Antitrust Regulatory Problem: Coordinating Concurrent Competition Powers*, [2000] 2 Util. Law Rev., 36-40.
- Ritter, C., *Refusal to Deal and "Essential Facilities": Does Intellectual Property Require Special Deference Compared to Tangible Property?*, [2005] World Competition, 281-298.
- Robertson, B., *What is a Restriction of Competition? The implications of the CFI's judgement in O2 Germany and the Rule of Reason*, [2007] ECLR 252-263.
- Roquest, F., Savva, K., *Investment under uncertainty with price ceilings in oligopolies*, Journal of Economic Dynamics and Control, February 2009, pp. 507-524.
- Rosenthal, M., Pate, H., Shores, R., Roth, P., *Efficiencies and remedies under the ECMR*, [2007] The European Antitrust Review, 31-36  
in Bellamy and Child (eds), *European Community Law of Competition*, 5<sup>th</sup> edn, Sweet & Maxwell, 2001.
- Rowe, H., *Local Loop Unbundling – UK: The UK Trade and Industry Committee Report on Local Loop Unbundling*, [2001] Comp. & Sec. Law Rep., 252-253.
- Russo, F., *Abuse of Protected Position? Minority Shareholdings and Restriction of Markets' Competitiveness in the European Union*, [2006] World Competition, 607-633.
- Ryan, P., *European Competition Law, Joint Dominance, and the Wireless Oligopoly Problem*, [2005] Columbia Journal of European Law, vol. 11, pp 353-371.
- Ryan, M., *Structural Separation: A Prerequisite for Effective Telecoms Competition?*, [2003] ECLR, 241-250.
- Ryan, M., *BT's Separate Accounts*, [1996] 4 CTLR, 147-149.
- Salerno, F., M., *Neutral Networks: The Paradox of Unbundling in the European Regulation of Energy and Telecommunications*, [2008] ECLR 471-479.

- Sauter, W., *The Consultation on EU Regulation for Convergence* [1999]1 Util. Law Rev., 3-5.
- Schechter, P.B., *Telecommunication in New Zealand: Competition, Contestability and Interconnection*, [1994] available at <http://pb.freeshell.org/nz.pdf>.
- Scherer, F. M., Ross, D., *Industrial Market Structure and Economic Performance*, 3<sup>rd</sup> edition, 1990.
- Schillemans, K., *Markets for Internet Network Access Defined, The Dutch Approach: A Negative Precedent for ISPs seeking Access to Broadband Intern Networks?* [2003] CTLR, 82-86.
- Schmalensee, R., *Output and Welfare Implications of Third Degree Price Discrimination*, [1981] 71 American Economic Review, 242-247.
- Shelanski, H., *From sector-specific regulation to antitrust law for US telecommunications: the prospects for transition* [2002] Telecommunications Policy, 351-354.
- Solomon, J., Walker, D., *Separating infrastructure and service provision: the broadband imperative*, [1995]2 Telecommunications Policy, 83-89.
- Stackelberg von, H., *Market Structure and Equilibrium*, 1934, Translation into English, Bazin, Urch & Hill, Springer 2011
- Stigler, G., *A Theory of Oligopoly*, [1964] Journal of Political Economy, 44-59.
- Stoyanova, M., *Competition Problems in Liberalised Telecommunications*, Kluwer, 2008.
- Stoyanova, M., *The Dangers of Over-Regulation in the Electronic Communications Sector*, [2007] World Competition, 107-135.
- Stratakis, A., *Comparative Analysis of the US and EU approach and enforcement of the Essential Facilities Doctrine*, [2006] ECLR, 434-442.
- Strivens, P., *New Access Conditions – a Challenge to Competitive*

- Telecoms Operators and Service Providers*, [2003] CTLR, 119-123.
- Stroux, S., *Collective Dominance under the Merger Regulation: A Serious Evolutionary Reprimand for the Commission*, [2002] ELRev, 736-746.
- Struijaart, R., *Minority Share Acquisitions below the Control Threshold of the EC Merger Control Regulation: An Economic and Legal Analysis*, [2002] World Competition, 173-204.
- Stuckmann, P. *EU Roaming Regulation – Towards Structural Solutions*, presentation for the WTO in Geneva 2012, [http://www.wto.org/english/tratop\\_e/serv\\_e/sym\\_marcelh12\\_e/presentation\\_stuckmann.pdf](http://www.wto.org/english/tratop_e/serv_e/sym_marcelh12_e/presentation_stuckmann.pdf)
- Subiotto, R., *The Right to Deal with Whom One Pleases under EEC Competition Law: A small Contribution to a Necessary Debate*, [1992] ECLR, 234-244.
- Subiotto, R., O’ *Defining the Scope of the Duty of Dominant Firms to Deal with Existing Customers under Article 82 EC*, [2003] ECLR, 683-694.
- Donogue, R.,
- Sutherland, E., *Collusion among Mobile Network Operators in France*, [2007] CTLR, 91-93.
- Sutherland, E., *International Mobile Roaming*, [2006] CTLR, 269-270.
- Sutherland, E., *International Roaming and Competition Law*, [2001] CTLR, 143-148.
- Sutherland, E., *International Roaming Charges: over-charging and competition law*, [2001] 25 Telecommunications Policy, 5-20.
- Tarrant, A., *Accounting Separation: The Hole in the Heart of the EU Telecommunications Regime*, [2003] ECLR, 273-279.
- Taylor, S., *European Commission’s Draft Guidelines on Market Analysis and the Calculation of Significant Market*

- Power: The Extension of Tetra Pak II to Regulation*  
[2001] CTLR 129-135.
- Teece, D., Coleman, M., *The meaning of monopoly: Antitrust Analysis in High Technology Industries*, [1998] Antitrust Bulletin, 801-857.
- Temple Lang, J., *Oligopolies and Joint Dominance in Community Antitrust Law*, [2001] Annual Proceedings of the Fordham Corp. L. Inst., 269-382.
- Toth, A., *Protection of Investments in European Abuse of Dominance Cases*, [2008] ECLR, 710-716.
- Turner, D., *A market-based bandwidth charging Framework*,  
Prevelakis, V., ACM Transactions on Internet Technology, Vol. 10,  
Keromytis, A., issue 1, Feb. 2010.
- Valcke, P., Querck, R., *EU Communications Law: Significant Market Power in the Mobile Sector*, EE, 2005.
- Lievens, E.,  
Van Liedekerke, *European Commission's Draft Notice on Access in the Telecommunications Sector*, [1997] July/August Int.Bus.Law., 318-329.
- Van Rompuy B., *Implications for the Standard of Proof in EC Merger Proceedings: Bertelsmann and Sony Corp. of America v. Impala (C-413/06 P) CJEU*, [2008] 10, European Competition Law Review.
- Vecchi, T., *Unilateral Conduct in an Oligopoly according to the Discussion Paper on Art. 82: Conscious Parallelism or Abuse of Collective Dominance?*, [2008] World Competition, 385-400.
- Vickers, J., *Competition Economics and Policy*, [2003] ECLR, 95-102.
- Vickers, J., *When is Discrimination Undue? in Regulating Utilities: Understanding the Issues*, [1998] Institute of Economic Affairs.
- Vinje, Th., Kalimo, H., *Does Competition Law require Unbundling of the Local Loop?*, [2000]3 World Competition, 49-80.

- Vollebregt, E., *EC Competition Law Aspects of Peer-to-Peer Networking*, [2002] CTLR, 63-66.
- Walden, I., *Telecommunications Law and Regulation: An Introduction* in Walden I., Angel, J., *Telecommunications Law*, Blackstone, 2002.
- Waters, P., *Mobile Competition: How many is too many?*, [2005] CTLR, 55-59.
- Waters, P., Yuen, A., *Operational Separation: A new Style of Regulation?*, [2006] CTLR 231-239.
- Weatherill, P., *EC Law*, 2<sup>nd</sup> edition, Penguin, 742.
- Beaumont, S.,
- Weitbrecht, A., *EU Merger Control in 2005 – An Overview*, [2006] ECLR 43-50.
- Whish, R., *Competition Law*, Butterworths LexisNexis, 2003.
- Whish, R., Sufrin, B., *Oligopolistic Markets and Competition Law*, [1992] 12 Yearbook of European Law.
- Whitefield, A., *Ofcom's Review of Telecommunications, Phase 2: BT Break-up by the Back Door?*, [2005] CTLR, 27-29.
- Wielsch, D., *Competition Policy for Information Platform Technology*, [2004] ECLR, 95-106.
- Willis, P., *When is a Market not a Market? Secondary Markets in the IT and Telecommunications Sectors*, [2002] CTLR, 170-173.
- Withers, Ch., *Where to now for EC oligopoly control?* [2001] ECLR, 295-304.
- Jephcott, M.,
- Zammit, B., Cachia, M., *Regulating Local Loop Unbundling in the European Union: A Means to an End or an End in Itslef?*, [2004] CTLR 111-118.

## **Statutory Instruments, Commission Documents and Case-Law**

### Directives

Commission Directive 88/301/EEC of 16 May 1988 on competition in the markets in telecommunications terminal equipment, [1988] OJ L 131/73.

Commission Directive 90/387/EEC of 28 June 1990 on the establishment of the internal market for telecommunications services through the implementation of open network provision, [1991] OJ L 192/1

Commission Directive 90/388/EEC of 28 June 1990 on competition in the markets for telecommunications services, [1991] OJ L 192/10.

Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision, [1997] OJ L 199/32.

Directive 97/51/EC of the European Parliament and of the Council of 6 October 1997 amending Council Directives 90/387/EEC and 92/44/EEC for the purpose of adaptation to a competitive environment in telecommunications, [1997] OJ L 295/23

Directive 98/10/EC of the European Parliament and of the Council of 26 February 1998 on the application of open network provision (ONP) to voice telephony and on universal service for telecommunications in a competitive environment [1998] OJ L 101/24

Commission Directive 1999/64/EC of 23 June 1999 amending Directive 90/388/EEC in order to ensure that telecommunications networks and cable TV networks owned by a single operator are separate legal entities, [1999] OJ L/175



Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to and interconnection of, electronic communications networks and associated facilities, [2002] OJ L108/7.

Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services, [2002] OJ L108/51.

Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, [2002] OJ L 108/33.

Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services, [2002] OJ L108/51.

Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector, [2002] OJ L201/37.

Directive 2004/25/EC of the European Parliament and the Council of 21 April 2004 on takeover bids, [2004] OJ L142/12

Commission Directive 2006/111/EC, transparency of financial relations between Member States and public undertakings, as well as on financial transparency within certain undertakings [2006] OJ L318/17

Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market on electricity repealing Directive 2003/54/EC, OJ L211/55

Directive 2009/136/EC of the European Parliament and of the Council of 25 November 2009 amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC

concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws.

Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities, and 2002/20/EC on the authorisation of electronic communications networks and services

### Regulations

Council Regulation (EEC) 4064/89 of 21.12.1989 on the control of concentrations between undertakings [1989] OJ L 395/1

Commission Regulation (EC) No. 2790/1999 of 22 Dec. 1999 on the application of Art. 81(3) of the Treaty to categories of vertical agreements and concerted practices

Council Regulation (EC) 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the EC Merger Regulation), [2004] OJ L 024/1

Regulation (EC) 717/2007 of the European Parliament and of the Council of 27 June 2007 on roaming on public telephone networks within the Community and amending Directive 2002/21/EC, [2007] OJ L 171/32

Regulation (EC) 544/2009 of the European Parliament and of the Council of 18 June 2009 amending Regulation 717/2007 on roaming on public telephone networks within the Community and Directive 2002/21/EC, [2009] OJ L 167/12

Regulation (EC) 1211/2009 of the European Parliament and of the Council of 25 November 2009 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Office, [2009] OJ L 337/1

Regulation 531/2012 of the European Parliament and of the Council of 13 June 2012 on Roaming on Public Mobile Communications Networks within the Union, [2012] OJ L 172/10

### Decisions

Commission implementing decision of 18 April 2011 amending decision 2009/766/EC on the harmonisation of 900 Mhz and 1800 Mhz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community, [2011] OJ L 106/9

### Recommendations

Commission Recommendation of 8 January 1998 on interconnection in a liberalised telecommunications market (Part 1 – Interconnection Pricing), [1998] OJ L73/42

Commission Recommendation of 8 April 1998 on interconnection in a liberalised telecommunications market (Part 2 – Accounting separation and cost accounting), [1998] OJ L 141/6

Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services, [2003] OJ L 114/45.

Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services, [2007] OJ L344/65

Commission Recommendation of 20.09.2010 on regulated access to Next Generation Access Networks (NGA), [2010] OJ L 251/35

Commission Recommendation 2013/466/EU of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment [2013] OJ L251/13

#### Notices and Guidelines

Guidelines on the application of EEC competition rules in the telecommunication sector [1991] OJ C233/2.

Commission Notice on the definition of relevant market for the purposes of Community competition law, [1997] OJ C 372/5.

Notice on the Notion of Full-function Joint Ventures, [1998] OJ C 66/1.

Notice on the Concept of Concentration, [1998] OJ C66/5.

Notice on the application of the competition rules to access agreements in the telecommunications sector, [1998] OJ C 265/02.

Summary of the Results of the Public Consultation on the Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors: Areas for further Reflection, SEC(98) 1284.

Notice on Remedies Acceptable under Council Regulation (EEC) 4064/89 and under Commission Regulation (EC) 447/98, [2001] OJ C68/3

Commission Guidelines on market analysis and the assessment of market power under the Community regulatory framework for electronic communications networks and services, [2002] OJ C 165/6

Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, [2004] OJ C31/03

Guidelines on the Assessment of Non-Horizontal Mergers under the Council Regulation on the control of concentrations between undertakings, [2008] OJ C-265/07

Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, [2009] OJ C 45/02

Communication Community Guidelines for the application of State aid rules in relation to rapid deployment of broadband networks [2013] OJ C 25/01

COM, SEC and other documents by European Union Bodies

Fifth Report on Competition Policy, 1975.

Towards a Dynamic European Economy: Green Paper on the Development of the Common Market for Telecommunications Services and Equipment, COM(87) 290 final.

Convergence of the Telecommunications, Media and Information Technology Sectors and the Implications for Regulation, COM(97) 623.

Communication on Interconnection Pricing in a Liberalised Telecommunications Market, [1998] OJ C 84/1.

Report on the Commission communication to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions entitled: 'Towards a new framework for Electronic Communications infrastructure and associated services – The 1999 Communications review', COM(1999) 539, [2000] OJ C204/3.

Opinion of the Economic and Social Committee on the 1999 Communications Review, [2000] OJ C204/3

Communication from the Commission: Unbundled Access to the Local Loop: Enabling the competitive provision of a full range of electronic communication services including broadband multimedia and high-speed internet, COM (2000) 237 final, 26.4.2000.

*Communication from the Commission: The results of the Public Consultation on the Communications Review 1999 and Orientations for the new Regulatory Framework*, COM (2000) 239 final, 26.04.2000.

Green Paper on the Review of Council Regulation (EEC) No 4064/1989, COM(2001) 745/6

1<sup>st</sup> report on the Commission proposal for the Access Directive, the Committee on External Trade, Research and Energy, 01.03.2001.

Draft Guidelines on market analysis and the calculation of significant market power under Article 14 of the proposed Directive on a common regulatory framework for electronic communications networks and services, COM (2001) 175.

Green Paper on the Review of Council Regulation (EEC) No. 4064/89, COM (2001) 745 final.

Final Report: Study on conditions and options in introducing secondary trading of radio spectrum in the European Community, May 2004.

Commission Staff Working Document on the treatment of VoIP under the European Regulatory Framework, 14 June 2004, [http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/working\\_docs/406\\_14\\_voip\\_consult\\_paper\\_v2\\_1.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/working_docs/406_14_voip_consult_paper_v2_1.pdf)

Accompanying Document to the Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on market reviews under the EU Regulatory Framework, COM(2007) 401 final.

Explanatory Memorandum to the draft Proposal for a Directive of the European Parliament and of the Council amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to and interconnection of, electronic communications networks and associated facilities and 2002/20/EC on the authorisation of electronic communications networks and services, COM (2007), 697 final

Proposal of the European Parliament and of the Council amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No2006/2004 on consumer protection cooperation, COM (2007), 698 final

Explanatory Note to the Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services, SEC (2007) 1483 final

2007 Telecoms Reform No. 2, November 2007, <http://ec.europa.eu/ecomm>.

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Progress Report on the Single European Electronic Communications Market 2007 (13<sup>th</sup> Report), COM (2008), 153 final

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Progress Report on the Single European Electronic Communications Market 2008 (14<sup>th</sup> Report), COM 2009, 140 final

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions:

Progress Report on the Single European Electronic Communications Market (the 15<sup>th</sup> Implementation Report) 2009, COM 2010, 253 final.

Staff Working Document accompanying the Commission Recommendation on NGA, SEC (2010) 1037 final.

Commission Report on the outcome of the functioning of Regulation No 717/2007 as amended by Regulation No 544/2009, COM(2011) 407 final.

European Commission, European Union 2011: Telecommunication Market and Regulatory Developments, 18 June 2012 (the Telecommunications Horizontal Assessment Report), issued as part of the Scoreboard 2012: [http://ec.europa.eu/information\\_society/digital-agenda/scoreboard](http://ec.europa.eu/information_society/digital-agenda/scoreboard)

Speech 11/502 of 06.07.2011 by Neelie Kroes, available at [http://ec.europa.eu/information\\_society/activities/roaming/index\\_en.htm](http://ec.europa.eu/information_society/activities/roaming/index_en.htm)

European Commission, Staff Working Document - Implementation of the EU regulatory framework for electronic communications – 2014, SWD(2014) 249 final

#### Commission Press Releases

IP/12/1361/12.12.12	IP/04/994, 26.07.2004
IP/12/938/05.09.12	IP/03/1797, 17.12.2003
IP/11/771, 22.06.2011	IP/02/849, 12.06.2002
MEMO/11/444, 22.06.2011	IP/01/1899, 21.12.2001
IP/11/58, 24.01.11	IP/99/786, 22.10.1999
IP/07/237, 26.02.2007	IP/99/298, 4.05.1999
IP/06/685, 26.05.2006	IP/98/430, 13.5.1998
IP/05/161, 10.02.2005	IP/96/975, 4.11.1996



**Notifications on Collective Dominance Cases**

Dates	Markets
29.08.2003	Case UK/2003/0001: Mobile access and call origination
25.06.2004	Case AT/2004/0063: access and call origination on public mobile telephone networks
01.10.2004	Case HU/2004/0096: Market for access and call origination on public mobile telephone networks
20.01.2005	Case IE/2004/0121: Access and call origination on public mobile telephone networks
15.07.2005	Case SE/2005/0203: Access and call origination on public mobile telephone networks
13.10.2005	Case NL/2005/0242: Wholesale access and call origination on public mobile telephone networks
21.10.2005	Case DK/2005/0243: Wholesale access and call origination on public mobile telephone networks
09.11.2005	Case IT/2005/0259: Access and call origination on public mobile telephone networks
16.12.2005	Case FI/2005/0304: the wholesale national market for international roaming on public mobile networks
22.12.2005	Case AT/2005/0312: Wholesale broadband access
30.01.2006	ES/2005/0330: access and call origination on public mobile telephone networks
21.04.2006	Case SI/2006/0362: Wholesale trunk segments of leased lines
03.05.2006	Case LU/2006/0369: Mobile access and call origination on public mobile telephone networks
07.06.2006	Case IT/2006/0393: wholesale national market for international roaming on public mobile networks
23.06.2006	Case CZ/2006/0405: Access and call origination on

	public mobile telephone networks
27.07.2006	Case IT/2006/0424: Broadcasting transmission services, to deliver content to end users
28.07.2006	Case DK/2006/0419: The wholesale national market for international roaming on public mobile networks
28.07.2006	Case LT/2006/0406: Access and call origination on public mobile telephone networks
07.08.2006	Case SI/2006/0434: The wholesale national market for international roaming on public mobile networks
10.08.2006	Case CZ/2006/0448: Transit services in the fixed public telephone network
10.08.2006	Case CZ/2006/0452: Wholesale national market for international roaming on public mobile networks
10.08.2006	Case MT/2006/0443: Access and call origination on public mobile telephone networks
10.08.2006	Case SK/2006/0442: Access and call origination on public mobile telephone networks
11.08.2006	Case CZ/2006/0451: Wholesale trunk segments of leased lines
24.08.2006	Case ES/2006/0460: wholesale national market for international roaming on public mobile networks
25.08.2006	Case AT/2006/0467: Wholesale trunk segments of leased lines
25.08.2006	Case AT/2006/0466: The wholesale national market for international roaming on public mobile networks
08.09.2006	Case IE/2006/0477: Wholesale national market for international roaming on public mobile networks
29.09.2006	Case EL/2006/0492: Access and call origination on public mobile telephone networks
03.10.2006	Case SE/2006/0496: The wholesale national market for international roaming on public mobile networks
10.11.2006	Case PL/2006/0517: The wholesale national market for international roaming on public mobile networks

15.12.2006	Case LV/2006/0545: Mobile access and call origination on public mobile telephone networks
24.01.2007	Case EL/2006/0558: wholesale national market for international roaming on public mobile networks
29.01.2007	Case MT/2007/0563: Wholesale broadband access
23/04/2007	Case BE/2007/0610: Mobile access and call origination on public mobile telephone networks
21/05/2007	Case DE/2007/0627: Market for access and call origination on public mobile telephone networks
30.05.2007	Case EE/2007/0629: Wholesale national market for international roaming on public mobile networks
24.08.2007	Case EE/2007/0670: Transit services in the fixed public telephone network
26.03.2008	Case PL/2008/0756: Wholesale mobile access and call origination
07.11.2008	Case MT/2008/0803: Wholesale broadband access
13.11.2008	Case SI/2008/0806: wholesale access and call origination on public mobile telephone networks
19.01.2009	Case IT/2008/861: Access and call origination on public mobile telephone networks
04.06.2009	Case SI/2009/913: Access and call origination on public mobile telephone networks
10.11.2010	Case PL/2010/1147: Access and call origination on public mobile telephone networks
22.12.2010	Case IT/2010/1157: Broadcasting transmission services, to deliver content to end users
01.08.2012	Case MT/2012/1349: Access and call origination on public mobile telephone networks.
15.11.2012	Case MT/2012/1375: Wholesale broadband access

EE/2012/1352

CY/2010/1076

EE/2007/0635 and DE/2005/0150

		0636	
DE/2012/1358-1359	UK/2010/1062	PL/2006/0379	SGGreffé (2005)D/200269
CZ/2012/1322	DK/2010/1023	LV/2006/0464	ES2005/0330
FR/2012/1354	CZ/2010/1037	UK/2006/0498- 0499	AT/2004/0097
SG-Greffé (2010) D/12414/13.08.2010	SI/2009/0913	IT/2006/0424	AT/2004/0126- 0127
PL/2010/1056	BG/2009/0911- 0912	SI/2006/0477	AT/2004/0106
FR/2010/1094	CZ/2009/0964	AT/2006/0466	DE/2004/0119
RO/2010/1101-02	EE/2009/0942-0943	IT/2006/0393	AT/2004/0097
IE/2010/1104	FI/2009/0900	MT/2006/0443	UK/2004/0094
AT/2010/1107	DE/2009/0947- 0948	DK/2006/0419	FI/2004/0062
DK/2010/1099	EL/2009/0934-0935	DK/2005/0189	IE/2004/0042
SE/2010/1032	MT/2009/0979	DK/2005/0208	IE/2004/0114
EE/2010/1038	LT/2009/1022	SE/2005/0188	IE/2004/121
LV/2010/1043-1044	IT/2009/1025- 1027	FR/2005/0205	UK/2003/0037
AT/2010/1046-1048	SI/2008/0806	IE/2005/0158- 163	UK/2003/0007- 0010
SE/2010/1061-1062	DK/2008/0863	DE/2005/0143	UK/2003/0035- 0036
CZ/2010/1070	PL/2008/0756	DE/2005/0233	UK/2003/0038
EL/2010/1072, 1074	MT/2008/0803	IE/2005/0137	AT/2003/0018
AT/2010/1084	SI/2008/806	IE/2005/0138	UK/2003/0003, 005-016
UK/2010/1064	NL/2008/0821- 0822	DK/2005/0141	FR/2012/1354
NL/2010/1041	UK/2008/0787	HU/2005/0152	DE/2012/1358
CZ/2010/1037	IT/2007/0729	IE/2005/0216	DE/2012/1359
RO/2010/1101	EE/2007/0670	DE/2005/0233- 0235	CZ/2012/1322

LT/2010/1035	DE/2007/0627	DK/2005/0204	CZ/2012/1392- 1393
FR/2010/1050	BE/2007/0610	SI/2005/0142 and 181	GI/2012/1334- 1345
SK/2012/1324-1325	, ES/2012/1314	BG/2012/1317	BG/2012/1317
EE/2012/1352	LV/2012/1356		

### Judgements of the European Court of Justice

Case C-56/12, *EFIM v. Commission*, Judgment of 19 September 2013

Joint Cases C-399/10P and C-401/10P *Bouygues S.A., Bouygues Telecom S.A. vs European Commission*, Judgment of 19 March 2013

Case C-52/09, *Konkurrensverket v TeliaSonera Sverige AB* [2011] ECR I-527

Case C-280/08 P, *Deutsche Telekom AG v Commission* [2010] ECR I-9555

Case C-202/07, *France Telecom v. Commission*, Judgment of April 2, 2009

C-413/06 P, *Bertelsmann AG v. Impala*, Judgment of 10 July 2008

Case C-12/03 P, *Commission v. Tetra Laval* ('Tetra Laval II'), judgement of 15 February 2005

Case C-418/01, *IMS Health*, judgement of 29 April 2004.

Case C-278/00, *Greece vs European Commission*, Judgement of the Court 29 April 2004

Case C-280/00 *Altmark Trans GmbH and Regierungspräsidium Magdeburg v Nahverkehrsgesellschaft Altmark GmbH*, Judgment of 24 July 2003

Case C-163/99, *Portugal v. Commission*, [2001] ECR I-2613

Case C-156/98 *Germany v Commission* [2000] ECR I-6857

Case C-75/97 *Belgium v Commission* [1999] ECR I-3671

Case C-395/96, *Compagnie Maritime Belge v. Commission* [2000] 3 CMLR 1076

Case C-7/97 *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs und Zeitschriftenverlag GmbH & Co KG* [1998] ECR I-7791

Case C-395/87, *Tournier*, [1998] ECR, 2521

Joint Cases C-68/94, *France v. Commission* and C-30/95 *Societe Commerciale des Potasses et de l'Azote and Entreprise Miniere et Chimique v. Commission* [1998] 4 CMLR 829

Case C-333/94 *Tetra Pak International v. Commission* [1996] ECR I-5951

Case 226/84, *British Leyland Public Limited Company v Commission of the European Communities*, Judgment of the Court of 11 November 1986

Joined Cases C-241/91 and 242/91, *RTE and ITP v. Commission of the European Communities*, [1995] ECR 743.

Case C-387/92 *Banco Exterior de España* [1994] ECR I-877.

Case C-6/97 *Italy v Commission* [1999] ECR I-2981.

Case C-482/99 *France v Commission* [2002] ECR I-4397.

Cases C-72 and 73/91, *Firma Sloman Neptun Schiffahrts AG vs Seebetriebsrat Bodo Zieseimer der Sloman Neptun Schiffahrts AG*

Case C-301/87, *France vs European Commission* , Judgement of 14 February 1990

Joint Cases 110/88, 241/88 & 242/88, *F. Lucazeau v Société des Auteurs, Compositeurs et Editeurs de Musique*, Judgment of the Court of 13 July 1989

Case C-303/88, *Italy vs European Commission*, Judgement of the Court of 21 March 1991.

Case C-62/86, *AKZO Chemie BV v. Commission* [1993] 5 CMLR, 215

Case C-89/85 *Alstrom v. Commission* [1993] ECR I-1307

Case C 66/86, *Ahmeed Saeed Flugreisen v. Zentrale zur Bekämpfung unlauteren Wettbewerbs*, Judgement of 11.4.1989, [1989] ECR 803

Joint Cases 110/88, 241/88 and 242/88, *Lucazeau*, [1988] ECR, 2811

Joined cases 142 and 156/84, *Philip Morris*, [1987] ECR 4487

Case C-322/81 *Michelin v. European Commission* [1983] ECR 3461

Case 172/80 *Gerhard Zuchner v. Bayerische Vereinsbank AG* [1981] ECR 2021

Case 85/76, *Hoffman-La Roche vs. Commission*, [1979] ECR, 461

Case 27/76 *United Brands v. Commission* [1978] ECR 207

Cases 6, 7/73, *Commercial Solvents v. Commission*, [1974] ECR 223

Case 6/72, *Europemballage Corp and Continental Can Co Inc v. Commission*, [1973] ECR 215

Judgments of the Court of First Instance

Cases T-79/2010 *Colt Telecommunications France vs Commission*, T-258/10 *Orange vs Commission* and T-325/10 *Iliad and others vs Commission*.

Case T-296/09, *EFIM v. Commission*, Judgment of 24 November 2011

Case T-336/07, *Telefónica, SA and Telefónica de España, SA v Commission*

Case T-271/03, *Deutsche Telekom v Commission*, Judgment of 10.04.2008

Case T-340/03, *France Telecom v. Commission*, Judgment of 30.01.2007

Case T-464/04, *IMPALA v. Commission*, Judgment of 13.7.2006

Case T-210/01, *General Electric v. Commission*, Judgment of 14.12.2005

Case T-193/02, *Laurent Piau v. Commission*, judgment of 26 January 2005

Case T-310/00, *WorldCom Inc v. Commission*, Judgment of 28.09.2004

Case T-5/02, *Tetra Laval BV v. Commission*, Commission Decision of 25.10.2002

Case T-342/99 *Airtours v. European Commission*, Judgment of 6.6.2002

Joined cases T-25/95, T-26/95, T-30/95 to T-32/95, T-34/95 to T-39/95, T-42/95 to T-46/95, T-48/95, T-50/95 to T-65/95, T-68/95 to T-71/95, T-87/95, T-88/95, T-103/95 and T-104/95, *Cementeries CRB v. Commission*, Judgment of 15.03.2000

Case T-228/97 *Irish Sugar plc v. Commission* [1999] ECR II 2969

Case T-10/96, *Gencor v. Commission*, [1999] ECR II-753

Case T-35/92, *John Deere vs Commission* , [1994] ECR II 957



Case T-68/89 *Societa Italiano Vetro v. Commission* [1992] ECR II 1403

Case T-30/89, *Hilti*, [1991] ECR II-1439

#### Commission Decisions - Mergers

Case COMP/M.6497, *Hutchison 3G Austria/Orange Austria*, Commission Decision of 12.10.12

Case COMP/M.6584, *Vodafone/Cable and Wireless*, Commission Decision of 03.07.12

Case COMP/M.6568 – *Cisco Systems/NDS Group*, Commission Decision of 23.07.2012

Case COMP/M. 5734, *Liberty Global Europe/Unitymedia*, Commission Decision of 25.01.2010

Case COMP /M.5730, *Telefonica/Hansenet*, Commission Decision of 29.01.2010

Case COMP/M.5669, *Cisco/Tandberg*, Commission Decision of 29.03.2010

Case COMP/M. 5650, *T-Mobile/Orange*, Commission Decision of 1.3.2010

Case COMP/M.5607, *Avaya/Nortel*, Commission Decision of 18.11.2009

Case COMP/M. 5532, *Carphone Warehouse/Tiscali UK*, Commission Decision of 29.06.2009

Case COMP/M. 5148, *DT/OTE*, Commission Decision of 2.10.2008

Case COMP/M.4947, *Vodafone – Tele2 Italy – Tele2 Spain*, Commission Decision of 27.11.2007

Case COMP/M. 4809, *FT/MidEuropaPartners/One*, Commission Decision of 21.09.2007

Case COMP/M. 4748, *T-Mobile/Orange Netherlands*, Commission Decision of 20.08.2007

Case COMP/M. 4662, *Syniverse/BSG*, Commission Decision of 4.12.2007

Case COMP/M. 4591, *Weather Investments/Hellas Communications*, Commission Decision of 4.4.2007

Case COMP/M. 4521, *LGI/Telenet*, Commission Decision of 26.2.2007

Case COMP/M.4477, *SES Astra/Eutelsat JV*, Commission Decision of 25.07.2007

Case COMP/M.4439, *Ryanair/AerLingus*, Commission Decision of 27.06.2007

Case COMP/M.4417, *Telekom Italia/AOL German Access Business*, Commission Decision of 28.11.2006

Case COMP/M. 4338, *Cinvin/Warburg/Pincus/Casema/Multikabel*, Commission Decision of 6.9.2006

Case COMP/M.4297, *Nokia/Siemens*, Commission Decision of 13.11.2006

Case COMP/M.4217, *Providence/Carlyle/UPC Sweden*, Commission Decision of 2.6.2006

Case COMP/M.4214, *Alcatel/Lucent Technologies*, Commission Decision of 24.7.2006

Case COMP/M.4204, *Cinvin/UPC France*, Commission Decision of 13.7.2006

Case COMP/M.4063, *Cisco/Scientific Atlanta*, Commission Decision of 22.2.2006

Case COMP/M.4035, *Telefonica/O2*, Commission Decision of 10.1.2006

Case COMP/M. 4034, *Telernor/Vodafone Sverige*, Commission Decision of 20.12.2005

Case COMP/M.4003, *Ericsson/Marconi*, Commission Decision of 20.12.2005

Case COMP/M.3695, *BT/Radianz*, Commission Decision of 22.4.2005

Case COMP/A.36.568/D3 – *Scandlines Sverige AB v Port of Helsingborg*

Case COMP/M.3530, *TeliaSonera AB/Orange AS*, Commission Decision of 24.9.2004

Case COMP/M.3411, *UGC/os*, Commission Decision of 17.5.2004

Case IV/M.3333, *Sony/BMG*, [2005] OJ L62/30

Case COMP/M.3280, *Air France/KLM*, Commission Decision of 11.02.2004

Case COMP/M. 3245, *Vodafone/Singlepoint*, Commission Decision of 16.9.2003

Case COMP/M. 2925, *Charterhouse/CDC/Telediffusion de France*, Commission Decision of 15.11.2002

Case COMP/M. 2851, *Intracom/Siemens/STI*, Commission Decision of 10.2.2003

Case COMP/M.2803, *Telia/Sonera*, Commission Decision of 10.7.2002

Case COMP/M.2726, *KPN/E-Plus*, Commission Decision of 7.3.2002

Case COMP/M.2565, *PPC/Wind*, Commission Decision of 28.11.2001

Case COMP/M. 2469, *Vodafone/Airtel*, Commission Decision of 26.6.2001

Case COMP/M.2463, *Speedy Tomato*, Commission Decision of 14.6.2001

Case COMP/M.2416, *Tetra Laval/Sidel* Commission Decision of 13.01.2003

Case COMP/M.2305, *Vodafone Group Plc/Eircell*, Commission Decision of  
Commission Decision of 2.3.2001

Case IV/M.2300, *Yle/Tdf/Digita JV*, Commission Decision of 26.6.2001

Case COMP/M.2257, *France Telecom/Equant*, Commission Decision of 21.3.2001

Case COMP/M.2220, *GE/Honeywell* Commission Decision of 03.07.2001

Case COMP/M.2137, *SLDE/NTL/MSCP/os*, Commission Decision of 16.10.2000

Case COMP/M.2016, *France Telecom/Orange*, Commission Decision of 11.8.2000

Case COMP/M. 1982, *Telia/Oracle/Drutt*, Commission Decision of 11.9.2000

Case COMP/M. 1943, *Telefonica/Endemol*, Commission Decision of 11.7.2000

Case COMP/M. 1845 *AOL/TimeWarner*, Commission Decision of 11.10.2000

Case COMP/M. 1838, *BT/Esat*, Commission Decision of 27.3.2000

Case COMP/M.1795 *VodafoneAirtouch/ Mannesmann*, Commission Decision of  
12.4.2000

Case COMP/M.1760 *Mannesmann/Orange*, Commission Decision of 17.11.1999

Case COMP/M. 1747, *Telekom Austria/Libro*, Commission Decision of 28.2.2000

Case COMP/M. 1741, *MCIWorldCom/Sprint*, Commission decision of 26 June 2000

Case IV/M.1669 *Deutsche Telekom/ One2One*, Commission Decision of 24.8.1999

Case COMP/M.1679, *France Telecom/STI/SRD*, Commission Decision of 21.10.1999

Case COMP/IV 1551, *AT&T/MediaOne*, Commission Decision of 23.7.1999

Case IV/M. 1524 *Airtours/First Choice* [2000] OJ L 93/01

Case IV/M. 1439 *Telia/Telenor*, Commission Decision of 13.10.99

Case IV/1430, *Vodafone/Airtouch*, Commission Decision of 6.5.1999

Case IV/ M 1357, *Nordic Capital/ Hilding Anders*, 04.02.1999

Case COMP/M. 1327, *NC/Canal+/CDPQ/Bank of America*, Commission Decision of 3.12.1998

Case IV/M.1225, *Enso/Stora*, [1999] OJ L254/9

Case No IV/M.1113, *Nortel/Norweb*, Commission decision of 18.03.1998

Case IV/ M 1088, *Thomson/ Friditresor*, decision of 04.02.1998

Case IV/M. 1069, *WorldCom/MCI*, Commission decision of 8 July 1998, C(1998) 1887 final

Case IV/ M. 1016 *Price Waterhouse/Coopers & Lybrand* [1999] OJ L 50/27

Case COMP/M.932, *Guinness/Grand Metropolitan*, [1998] OJ L228/24

Case IV/M 619, *Gencor/Lonrho*, [1997] OJ L11/30

Case IV/M. 570, *TBT/BT/Teledanmark/Telenor*, Commission Decision of 24.4.1995

Case IV/M.490, *Nordic Satellite Distribution*, 19.7.1995 (1996) OJ L 53/20

Case IV/M.469, *MSG Media Service*, Commission Decision of 9.11.1994,

Case IV/M.358 *Pilkington-Techint/SIV* [1994] OJ L 158/24

Case IV/M.353, Commission Decision of 13.9.1993, *BT/MCI*.

Cases IV/M.308, *Kali and Salz*, [1994] OJ L 186/38

Case IV/M 190 *Nestle/ Perrier* [1992] OJ L365/1

Case IV/M 166, *Torras/Sarrio*, Commission Decision of 24.02.1992

Case IV/ M 157 *Air France/ Sabena*, Commission Decision of 05.10.1992

#### Commission Decisions - Antitrust

Case COMP/38.784, *Wanadoo Espagna v Telefonica* [2008]OJ C83/6

Case COMP/38.233 *Wanadoo Interactive*, Commission decision of 16 July 2003

Case COMP/C-3/37.792, *EC Commission v. Microsoft*, decision of 24 March 2004

Case COMP/C-1/37.451, 37.578, 37.579, Commission Decision of 21.05.2003, *Deutsche Telekom*, [2003] OJ L 263/9

Case COMP/36.841, *Unisource*, Commission Decision of 29 December 2000

Case IV/36.359, *British Interactive Broadcasting/Open*, [1999] OJ L 312

Case IV/M.35.617, *Phoenix/Global One*, Commission Decision of 17.7.1996, [1996] OJ L239/57

Case IV/35.545, Decision of 16.1.1996, *Lufthansa/SAS* [1996] OJ L 54/28.

Case IV/35.528, Commission Decision of 18.12.1996, *Iridium* [1997] OJ L16/87.

Case IV/35.337, *Atlas*, Commission Decision of 17 July 1996

Case IV/ 35.269, *Inmarsat*, [1995] OJ C304/6

Case COMP/35.141, Commission Decision of 20.03.2001, *Deutsche Post AG*, [2001] OJ L125/27

Case IV/35.134, Decision 1999/243/EC, *TACA* [1999]4 CMLR 1454

Case IV/34.857, *BT-MCI*, Commission Decision of 27 July 1994

Case IV/33.440, *Warner-Lambert/Gillette*, Commission decision of 10.11.1992,

Case IV/30.698 Decision of December 15, 1985, *ECS/AKZO* [1985] OJ L374/1

Case IV/30.178, Decision of 18.07.1988, *Napier Brown/British Sugar* [1988] OJ L284/4

#### National Court Cases

*Aspen Skiing Co v Aspen Skiing Corp (Aspen)* (1985) 472 U.S. 585

*Associated Press v. United States* (1945) 326 U.S. 1,

*Macquarie UK Broadcast Ventures Limited/ National Grid Wireless Group*, Clearance of 11.3.2008 at [www.competition-commission.org.uk](http://www.competition-commission.org.uk).

*Matsushita Electric Industrial Co v Zenith Radio Corp* 475 US 574 (1986)

*MCI v. AT & T*, 708 F.2d 1081

*Napp Pharmaceutical Holdings Limited v. DGFT*, [2002] 4 All ER 376

*Otter Tail Power v. United States* (1948) 334 U.S. 100

*Telecom Corp of New Zealand Ltd vs Clear Communications Ltd*, [1995]1 NZLR385

*United States vs Terminal Railroad Association of St. Louis* (1912) 224 U.S. 383, 32 S. Ct. 507

*US v. DuPont de Nemours & Co*, [1953] 118 F.Supp. 41, 208

*United States v. AT&T*, 552 F. Supp. 131 (DDC 1982)